The Relationships Between Attitude, Motivation, Anxiety, and Proficiency in English as a Second Language of First-Year University Students in Puerto Rico

Carmen Mercedes Cortés
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THE RELATIONSHIPS BETWEEN ATTITUDE, MOTIVATION, ANXIETY, AND PROFICIENCY IN ENGLISH AS A SECOND LANGUAGE OF FIRST-YEAR UNIVERSITY STUDENTS IN PUERTO RICO

A Dissertation
Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

by
Carmen Mercedes Cortés

July 2002
THE RELATIONSHIPS BETWEEN ATTITUDE, MOTIVATION, ANXIETY, AND PROFICIENCY IN ENGLISH AS A SECOND LANGUAGE OF FIRST-YEAR UNIVERSITY STUDENTS IN PUERTO RICO

A dissertation presented in partial fulfillment of the requirements of the degree Doctor of Philosophy

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Carmen Mercedes Cortés

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June 28, 2002

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ABSTRACT

THE RELATIONSHIPS BETWEEN ATTITUDE, MOTIVATION, ANXIETY, AND PROFICIENCY IN ENGLISH AS A SECOND LANGUAGE OF FIRST-YEAR UNIVERSITY STUDENTS IN PUERTO RICO

by

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Chair: Jimmy Kijai
ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

School of Education

Title: THE RELATIONSHIPS BETWEEN ATTITUDE, MOTIVATION, ANXIETY, AND PROFICIENCY IN ENGLISH AS A SECOND LANGUAGE OF FIRST-YEAR UNIVERSITY STUDENTS IN PUERTO RICO

Name of researcher: Carmen Mercedes Cortes

Name and degree of faculty chair: Jimmy Kijai, Ph.D.

Date completed: July 2002

Purpose of the Study

The purpose of this study was to determine the attitudes, motivation, and anxiety levels of first-year university students toward the learning and use of English as a second language. The study also examined the nature of the relationships between attitudes, motivation and anxiety, and English proficiency as measured by the College Entrance Examination Board.

Method

A Spanish version of The Attitudes/Motivation Test Battery (Gardner, 1985a), "Espejo de Actitudes": Aprendizaje del Inglés como Segundo Idioma en Puerto Rico," was administered to first-year college students at the University of Puerto Rico. Mayagüez Campus. These students came from various regions of the island of Puerto Rico.
Rico. The effective sample size for this study was 2.008. The survey was administered to teachers during regular classes.

Responses were coded and analyzed using various descriptive and inferential statistical techniques including means, standard deviation, Pearson r, multiple regression analysis, and canonical correlation analysis.

Results

Generally the following results were found: (a) students have moderate levels of motivation to learn and use English, (b) low attitudes toward English teachers and classes, (c) low parental encouragement, (d) moderate levels of integration and instrumental orientation, (e) moderate levels of anxiety towards using English, and (f) anxiety in using English was the best predictor of proficiency in English as a second language.
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CHAPTER I

INTRODUCTION

At 100 miles long and 35 miles wide, Puerto Rico is the smallest of the Greater Antilles chain. The island was discovered by Christopher Columbus in 1492 and colonized shortly thereafter by the Spaniards. As a result of the Spanish-American War, Puerto Rico became a colony of the United States in 1898. Once the island became a territory of the United States, the learning of English became a major educational concern. Should English be the language of instruction in Puerto Rican schools? The socio-political and educational milieu of Puerto Rico has influenced this question for over a hundred years. Many laws, language policies, and regulations formulated at the federal level of government in the United States and in Puerto Rico have emerged. Among them are those that relate directly to bilingual and English as a second language (ESL) education. For nearly a century the stated goal of government language teaching in Puerto Rico has been the bilingualization of the island’s population. Both public and private schools have been assigned to train students to be linguistically competent in two languages - Spanish and English. They do this by using English and Spanish as the languages of instruction (Resnick, 1993). This instruction is done in the context of Spanish as the official language, and the main spoken language, and English as a required subject to be taught as a second language in Grades 1 through 12.
There are numerous arguments for and against the learning of English as a second language in Puerto Rico. Understanding and communicating in English is necessary because of Puerto Rico's role within the framework of the American and Caribbean socio-political and economic affairs (Aloise, 1992). There are social, cultural, intellectual, technological, political, and economical reasons that demand the knowledge of English. As such, Puerto Rico should be a bilingual community—not merely a community that is composed of some Spanish speakers only and some English speakers only, but instead a community composed of people able to communicate in both oral and written Spanish and English. The global view of the educational system in Puerto Rico suggests that students be prepared to face the challenges of the post-information age and be prepared to become effective participants in the evolution of its history.

At the university level, English is the main modality of learning and instruction since all major textbooks are in English. Knowledge of English as a second language is a requirement for university graduation. In addition, there are direct and indirect economic incentives for being proficient in English. Many jobs require the applicants to be fluent in English. In technology and pharmaceutical companies, which are based in the U.S., work and safety manuals are printed in English. There are areas in the Island where English is the predominant means of communication: United States government agencies, banks, transportation, American manufacturing companies, tourist-oriented retail businesses, hotels, and certain communication systems. Most of the better-paying jobs in Puerto Rico require a working knowledge of English. These are the direct
incentives. Not learning English has personal costs as well. These are indirect incentives for learning a second-language. Puerto Ricans who only speak Spanish have problems when they visit the United States. Many grandparents cannot communicate with their American grandchildren. Many forms of entertainment are only in English. And then there is the question of one’s self esteem—having to depend on your children to communicate for you is embarrassing. Clearly, it is advantageous to be proficient in English.

However, there is resistance to the teaching and learning of English in Puerto Rico. Nunez (1996) suggested that the reluctance to embrace the learning of English is primarily due to the view that it is a language forced upon the island. Pousada (1996) argues that many citizens of the Island still feel an attachment to Spain and do not want Spanish to be linguistically corrupted. Indeed, Lopez (1998) hinted that the decadence of the Spanish language is due to the interference of the English language. Coll (1977) argues that Puerto Ricans have the right to defend the eloquence of Spanish as their mother tongue and that one should not be easily swayed by the argument that learning English will bring Puerto Rico to a closer economic tie with the United States. Many view the use of the English language as a symptom of American imperialism and a menace to the Puerto Rican personality (Aloise, 1992).

Despite the controversy surrounding the use of English in Puerto Rico, the Department of Education and state Education Planning Boards continue to place great emphasis on the teaching and learning of English. They contend that proficiency in both
Spanish and English is necessary in order for Puerto Ricans to function and compete in a global community. These agencies regularly evaluate the effectiveness of the English program and attempt to find better alternative methods.

Given the arguments for and against the use of English in Puerto Rico, what are the attitudes and motivations among students, particularly at the university level, towards the learning of English as a second-language? Various researchers have studied Puerto Rican students' attitudes toward learning English as a second language (Aloise, 1992; Perez-Birmingham, 1992; Epstein & Mc Portland, 1976; Guzmán, 1998; Llado-Berrios, 1984; Van Trieste, 1986, 1987b; Vega, 1998) and motivation to learn English (López, 1990). However, none of these studies attempted to relate attitudes and motivation to formal measures of English proficiency. Most studies investigated attitudes and motivations at the elementary and secondary levels. Few investigated college-level students in relationship to course grades. This study examined student attitudes and motivation at the university level using a broad population.

The current socio-political situation in Puerto Rico provides an appropriate and useful environment for the study of attitudes, motivation, and anxiety levels in second-language learning. Ramsden (1992) maintains that the way to improve teaching is to study the learning experience of the student. Likewise, Baker (1996) argues that it is important for second-language teachers to discover the learner's feelings and beliefs about the language experience.
Purpose of the Study

The purposes of this study were: (a) to examine the attitudes, motivations, and anxiety of first-year university students towards the learning of English as a second-language, and (b) to investigate relationships among attitudes, motivation, anxiety, and English proficiency. The sample for this study was drawn from the population of first-year students from the University of Puerto Rico – Mayaguez.

Conceptual Framework

The framework used to explain the relationship between the variables in the translated version of Gardner’s (1985a) A/MTB and (College Entrance Examination Board (CEEB) scores is based on Gardner’s (1985a) original socio-educational model. This model is developed from other models of language social psychology. It has its formal roots in Lambert’s (1970) socio-psychological model, and a model proposed by Carroll (1967) concerned with the predictability of achievement based on the traditional learning theories of cognitive psychology. The Socio Psychological model that Lambert developed (1970) was based on Carroll’s, but he developed a component of bilingual development and self-identity (Gardner, 1985a). Lambert’s model adds linguistic distinctiveness, and argues that, as well as attitudes, they originate early in the socialization process. Schumann’s model (1975) continues to relate development of attitudes with the identification of the other community. Clement’s Socio Context Model (1980) continues with the same ideal that attitudes are developed with the identification with the other community. Of the two language development types in Krashen’s
language acquisition is of particular relevance to the study because it refers to the subconscious state of acquiring language through attitudinal and motivational factors. Common to all these models is motivation, goal-directed purposeful behaviors, and predictability of achievement.

All the models of language learning mentioned above do not qualify as theories in the strict sense since not one of them contained formal axioms or could generate predictions (Gardner, 1985a). All of these models emphasize concepts and attempt to organize data. They are descriptive and are therefore susceptible to many different interpretations. To view one model as superior to the other would prove to be a limited view of the complexity involved in the language-learning situation. On the other hand, to take into account all of the attitudinal and motivational factors mentioned by these researchers and to compare them with the actual data obtained through this study might prove beneficial to Puerto Rico.

Gardner used ideas from all the above models. The major concepts of Gardner's model are: language attitudes, motivation, anxiety, intelligence, aptitude and achievement. Attitudes are complex and many definitions have been used to describe them. Gardner (1985a) uses the term attitude as referring to the mental and neural state of readiness, organized through experience, which exerts an influence on the individual's response to all objects and situations to which it is related. Vega (1998) states that language attitudes may include beliefs, values, opinions, emotions, and language
experience. Attitudes develop early in life and are considered to be part of the socialization process (Oller, 1977).

The Socio-Educational Model is the theoretical framework that served as a basis for this investigation. It is related to educational language attitudes (toward the school environment) and social attitudes (toward the cultural context, motivational orientations, and social psychology). He used causal modeling to assess its validity.

Attitudes and motivation transcend methodology and all other educational considerations (Gardner, 1985a). Considerable research has demonstrated that attitudes and motivation play an important role in learning a second-language, and that achievement is related to measures of attitudes and motivation. A large body of research has demonstrated a relationship between attitudinal motivational variables on one hand and proficiency in a second language on the other (Clement, 1980; Dornyei, 1994; Gardner & Lambert, 1959, 1972; Tremblay & Gardner, 1995).

Gardner’s model (see Figure 1) stresses that learning another language, unlike other school subjects, involves incorporating skills and behavior patterns of another cultural community. The second language is an important component of this cultural community. This model includes four categories: social milieu, individual differences, learning contexts, and outcomes. Social milieu refers to the cultural beliefs held about learning the second-language. The individual differences that Gardner emphasizes in his model are intelligence, language aptitude, motivation, and situational anxiety. Learning contexts are formal and informal language training or experience. Outcomes include
both linguistic and nonlinguistic factors, such as positive attitudes toward the target language group or interest in continuing language study. According to many other researchers, as well as Gardner, "the language acquisition process is viewed as involving a particular causal interplay of the four types of variables" (Gardner, 1985a). In this model, motivation refers to the effort, desire, and affect related to learning a second-language. Motivation is the factor that determines how well the language is learned. Anxiety is also seen as an important factor in the model because it has an "inhibiting effect on the individual's performance. thus interfering with acquisition" (Gardner, 1985a). The outcomes of the model are of an affective (nonlinguistic) and educational (linguistic) nature. The nonlinguistic outcomes are the educational and social attitudes toward second-language learning.

This study used Gardner's Model to explain the relationships between the variables assessed by "The Attitude/Motivation Test Battery", a translated adapted version for Puerto Rico and achievement (see Figure 2). All the variables under investigation are an integral part of the Socio-Educational Model or direct derivatives of it. Figure 1 presents the Socio Educational Model Gardner (1985a). Figure 2 presents the model according to this research. Figure 3 presents the conceptual model for this research.
Figure 1. The original Socio Educational Model Gardner (1985a).

Figure 2. The Socio Educational Model in the context of this research.

As shown in Figure 2 this study will assess Cultural Beliefs (attitudes) and the individual differences in Motivation and Anxiety. The model shown in Figure 3 shows the conceptual framework related to the Spanish version of the A/MTB and the dependent variable used in this investigation.
Figure 3. Conceptual framework of the Spanish version of the AMTB.

As applied to this study, the independent variables considered were: Desire to Learn English, Motivational Intensity, Evaluation of English Teachers, Evaluation of English Classes, Attitude Toward Americans, Attitude Toward Foreign People, Interest in Foreign Languages, Instrumental Orientation, Integrative Orientation, Parental Encouragement, English Class Anxiety, and English Use Anxiety. The studies dependent
variable was CEEB Score.

Since the Socio-Educational model makes specific predictions about relationships among these variables, a number of research hypotheses were developed using different variables as independent and other times as dependent. These were selected because of the predictions of the model. The model posits that the Integrativeness Index, the Motivation Index, and Attitude Toward the Learning Situation Index will correlate forming the “integrative motive” (Gardner, 1985a), that all variables will be related to each other. anxiety will correlate negatively with achievement, and motivation will correlate positively with achievement. Based on these relationships between the variables assessed by the A/MTB translated version and achievement, the research questions were developed.

**Research Questions**

The proposed research is addressing substantive questions about the nature of attitudes, the Motivation Index. Parental Encouragement, Instrumental Orientation of Puerto Rican first-year college students toward the teaching and learning experience of English as a second language in Puerto Rico, and its relationship to students' performance.

**Question 1:** Is there a linear correlation between measures the Motivation Index, the Integrativeness Index, and Attitude Toward the Learning Situation Index? What attitudes revealed in the survey explain the variance in the Motivation Index?

**Question 2:** Is there a correlation between the Motivation Index, Parental
Encouragement, English Class Anxiety, English Use Anxiety, and the Motivation Index? What attitudes revealed in the survey explain the variance in the Motivation Index?

Question 3: Is there a correlation between Attitude Toward the Learning Situation Index and the Integrativeness Index? What attitudes revealed in the survey from the subscales of the Integrativeness Index will explain the variance of the Motivational Index subscales?

Question 4: Is there a linear correlation between the Integrativeness Index, Attitude Toward the Learning Situation Index, the Motivation Index, and CEEB Scores? What attitudes are revealed in the survey in the following indexes (the Integrativeness Index, Attitude Toward the Learning Situation Index, and the Motivation Index) will explain the variance in CEEB Scores?

Question 5: Is there a correlation between English Class Anxiety, English Use Anxiety, Parental Encouragement, Instrumental Orientation, and Desire to Learn English, Motivational Intensity, and Attitude Toward Learning English? What attitudes or anxiety levels revealed in the survey will explain the variance of the following subscales: Desire to Learn English, Motivational Intensity, and Attitude toward Learning English?

Question 6: Is there a correlation between English Class Anxiety, English Use Anxiety, Parental Encouragement, Instrumental Orientation, and Desire to Learn English, Motivational Intensity, and Attitude Toward Learning English? Canonical correlations were performed on the data from the entire sample.
Question 7: Is there a linear correlation between CEEB Scores and the following sub-scales?

a. Attitude Toward Foreign People
b. Interest in Foreign Languages
c. Integrative Orientation
d. Instrumental Orientation
e. Attitude Toward Americans
f. Evaluation of English Teachers
g. Evaluation of English Classes
h. Motivational Intensity
i. Desire to Learn English
j. Attitude Toward Learning English
k. English Class Anxiety
l. English Use Anxiety
m. Parental Encouragement.

What attitudinal, motivational, or anxiety levels as revealed in the survey explain the variance in the CEEB Scores?
Significance of the Study

This study was undertaken in order to examine the levels of motivation and the attitudes of first-year university students toward the use of English as a second language and how such attitudes and motivation relate to English proficiency as measured by the College Entrance Examination Board (CEEB). The results of this study may provide insight into significant variables that influence successful learning of a second language. Such knowledge would be useful to those involved in the planning of language learning on the island and for those who are in charge of second-language improvement programs in private and public schools in Puerto Rico. Research has indicated that in order to deal effectively with second-language learners, teachers should take into consideration not only the pedagogical complexities influencing the classroom processes but also the learners’ perceptions and attitudes toward the learning experience (Baker, 1996). This study might contribute to the field of second-language learning by increasing knowledge of the role and importance of affective components in second-language acquisition. It would provide teachers with information in detecting and coping with students’ feelings toward the school, the language learning experience, and the targeted language culture.

Delimitations

This sample in this study is limited to first-year students enrolled in English as a second language classes during the 2001-2002 academic years at the University of Puerto Rico – Mayaguez. The university is primarily an agriculture/engineering institution. The
findings may not be generalizable to students in other academic disciplines. In addition, the findings may not generalize to other class standings (sophomore, junior, senior and graduate). This study examined only attitudes, motivation, and anxiety levels towards the use of English as a second language.

Assumptions

The following assumptions were made:

1. Students provided responses that they genuinely believed to be correct to the items on the instruments.

2. The instrument used in this study had the appropriate readability level so that all students were able to understand each item correctly so as to provide valid responses.

Definition of Terms

In this study the following frequently used terms are defined as indicated below:

Affective domain: Encompasses attitude, motivation, feelings, beliefs, and emotions.

Attitude: A predisposition to perceive, feeling, or behavior toward specific objects or certain people in a particular manner.

Second-language: Describes a language other than one’s native language.

ESL: English as a second language.
Integrativeness: General category of the Attitude Motivation Test battery (Gardner, 1985a) which refers to the individual’s willingness and interest in having social interaction with members of the second-language group.

Language anxiety: The individual’s apprehension in the language class or setting.

Organization of the Study

This study is presented in five chapters:

Chapter 1 presents the introduction, the statement of the problem, the research questions, the rationale, the significance of the study, the delimitations and limitations of the study, the definitions of the terms used in the text, and the organization of the study.

Chapter 2 reviews literature related to attitudes/motivation, parental encouragement, instrumental orientations, integrative orientation and anxiety in second-language learning studies in Puerto Rico and other countries.

Chapter 3 describes the methodology, including the population and sample instrumentation, pilot study results, procedures in carrying out the study, and statistical analysis.

Chapter 4 presents the findings of the study.

Chapter 5 presents discussion and interpretation of the findings, summarizes the results, and provides suggestions for further study.
CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH

Overview

The literature review’s organizational scheme is as follows. Attitudinal
Motivational constructs of the Socio–Educational Model (Gardner, 1985a), a historical
view of English as a second language in Puerto Rico, literature reviews of
attitudinal/motivational studies in Puerto Rico, methodology used, and the instrument
selection.

Attitudes/Motivation and Second-Language Learning

Some researchers investigating second-language acquisition argue that the social
milieu of the learner influences individual difference variables (attitudes, motivation, and
anxiety) involved in learning a second language (Gardner & Clement, 1990; Gardner,
Lalonde, & Pierson, 1983). This group of attitudes is also called by many researchers the
“social milieu” which also involves attitudes developed at home, school, and the
environment. Closely related to the attitudinal research and often an integral part of this
research is motivation (integrative and instrumental orientations). These differences tend
to affect the type of attitude the individual develops, which in turn affects their
motivation to learn the second language (Clement & Kruidenier, 1985; Dornyei, 1998;
Gardner, 1985a, 1988; Gardner & Clement, 1990; Gardner & Lambert, 1972; Gardner,
Tremblay, & Masgoret, 1997; Ramage, 1990). Therefore, researchers

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Concerned with the effect of attitudes on second-language learning attempt to identify various factors that could influence motivational orientations. Social attitudes may affect educational attitudes or vice versa and both types of attitudes may underlie a student's motivation to learn a second language and influence achievement levels.

In the field of attitudinal research, one specific attitude is not investigated in isolation. Therefore, for purposes of discussion, the literature review is subdivided into the following attitudinal areas: (a) orientation (motivation), (b) attitudes toward the learning situation, and (c) classroom anxiety. The review of this literature has been separated into these components, because it allows the researcher to discuss and establish a relationship between the variables that are used in this study, as measured by the Attitudes Motivation Test Battery (A MTB) (Gardner, 1985a), and studies on the island on the same attitudes.

**Orientation**

Gardner and Lambert's (1959, 1965, 1972) pioneering research established the importance of attitudes and motivation in relation to learning outcomes in second-language acquisition. They laid the groundwork for further investigations. Before their extensive investigations, little research (Jones, 1950a, 1950b; Jordan, 1941) had looked into the attitudinal aspect of second-language achievement.

Gardner and Lambert's findings grew out of the theoretical framework used for first-language development, in Mower's (1950, cited in Gardner & Lambert, 1972) work. Mower suggests that, for infants, language sounds acquire secondary properties
because these are associated with the satisfaction of basic biological and social needs. The child tends to imitate the parents, which Mowrer calls "identification."

Mowrer's explanation led Gardner and Lambert (1972) to reason that a similar process like identification could possibly occur with the other ethno-linguistic groups. This process might underlie the motivation needed to master the second language. Because the identification referred to in first-language learning is derived from the satisfaction of basic biological and social needs, Gardner and Lambert introduced the term "integrative motive" which involves interpersonal or social motives.

The integrative orientation refers to "a willingness to become a member of another ethno-linguistic group" (Gardner & Lambert, 1972, p. 62) as a facilitator of second-language acquisition. They have found this to be a high level of drive of the student to acquire the language of a valued second-language community. They found that this drive combined with inquisitiveness and interest in the group would underlie the motivation needed to master a second language. Their research also indicated that second-language learners' attitudes toward speakers of the target language played an important role in second-language learning. Learners with positive attitudes towards the target-language speakers and their culture were found to be more successful than those students whose attitudes were negative (Gardner, 1985a). The goal of integrative motivation, as the author calls it, is to learn more about the target-language group and identify with them. Gardner argues that because language is an integral part of culture, learning is dependent upon the learner's willingness to identify with the culture and incorporate aspects of the culture, including linguistic repertoire, into one's own behavior (Gardner et al., 1983). Integrativeness, then, is the measure of indices of integration or
the attributes that reflect a positive outlook toward the other language group. It is also consistently related to proficiency (Brown et al., 1995; Dornyei, 1994; Gardner et al., 1977; Genesee, 1987; Spolsky, 1989).

Another orientation researched by Gardner and Lambert (1972) is the instrumental motive, which is characterized by a desire for social recognition or economic advantages through knowledge of a foreign language. Brown (1995) also argues in favor of the above orientation. Learners who are instrumentally motivated are not necessarily interested in the language or the culture of the target language group; their interest is personal satisfaction and the benefits that might be derived from learning the second language. Gardner (1985a) added that instrumental orientation, which he identifies as a powerful motivator, could also influence achievement. However, he makes clear indications that the major aspect in second-language achievement is not the instrumentality per se, but the motivation. He then makes a clear distinction between what are integrative and instrumental orientations. Lambert (1984a) makes the distinction even clearer, indicating that integrative orientation reflects an interest of the learner with the people and culture of the other language, while instrumental orientation refers to the practical values and advantages of learning the second language. Many studies use the orientation factors as a major affective measure, contrary to Gardner and Lambert (1974); (Baker, 1996; Brown, 1990; Oller, 1982; Oller, Hudson & Liu, 1977). Instrumental orientation is a concept of attitudes that influences achievement as a concept on its own in the AMTB (Gardner, 1985a).

Nevertheless, the types of motivation orientations are not mutually exclusive. Another type of motivation related to effective second-language achievement depends on
the particular situation or context in which the language is being learned. For example, Clement (1980), Dornyei (1994, 1998), Gardner (1985a), Gardner and Lambert (1972), Giles and Byrne (1982), Oxford and Burry-Scock (1995), Schumann (1975), and Tremblay and Gardner (1995) found relationships among individual difference variables (orientations) and achievement in second-language learning. Integrative motivation was related to successful learning of French in some schools in Canada and in some schools in the United States, but instrumental motivation was related to the successful learning of English in the Philippines and other countries outside the mainland. In each context studied, there was a distinct attitudinal basis for the motivation. Some attitudes, which seem to underlie the motivation for second-language learning in the various contexts, were also related to English achievement. Other attitudes were: positive attitudes toward the target group, favorable attitudes toward their own cultural group, parental support and encouragement, and the realization of the usefulness of knowing the language. Likewise, these studies revealed that ethnocentric and hostile attitudes seem to predict no progress in acquiring a second language.

One of Gardner and Lambert's (1972) main working hypothesis was that the integratively oriented student might be "better motivated because the nature of their goals was more likely to sustain the long-term effort needed to master a second language" (p. 16). In the three settings where the studies took place within the United States, Louisiana, Maine, and Connecticut, each context provided second-language learners with distinct attitudinal basis for the underlying motivation to learn a language.

Various other researchers (Clement, Gardner & Smythe, 1977; Dornyei, 1994; Spolsky, 1989) have studied the role of attitudes and motivation of second-language
learning. Lukmani (1972) tested the two kinds of motivation on Marathi High School students and found that English proficiency correlated significantly with instrumental motivation rather than integrative motivation. Lukmani concluded, contrary to Lambert and Spolsky, that English proficiency "arises from the desire to use English not as a means of entry into a reference group, but as a tool with which to understand and cope with the demands of modern life" (p. 271). In this study, it seems that attitudes toward the language learners' own community and the ideal self are correlated with orientation and English proficiency. Domneyi (1994) studied the relevance of integrativeness and instrumentality in foreign language learners. This researcher found that learners with a high level of instrumental motivation and a need for achievement were able to attain an intermediate level of instrumental motivation and an intermediate level of proficiency in the target language. Nevertheless, in order to attain proficiency beyond the intermediate level, a student would also have to be integratively motivated to learn the target language.

Research by Gardner, Smythe (1981) focused on orientations and faced two conceptual difficulties. First it was expected that the two orientations would correlate positively with one another and contribute to the same dimension in factor analytic studies. This was expected due to the fact that many individuals who study a second language might study it for both reasons. The other difficulty was based on Spolsky's (1989) research findings that indicated that anyone could study the second language for many reasons. The importance was based on the degree of effort people would make to learn the language. Therefore, there is a major distinction between orientations and motivations. Orientations refer to the reasons for studying a second language while motivation refers to the directed effort to learn it.
Motivation

Motivation is a concept that is composed of three dimensions. One important component of motivation is having a goal to learn the language (Gardner, 1985a). Because the goal for learning the second language cannot be directly measured, it has been expressed in terms of the reasons to learn the language, motivational orientations, as discussed in the previous section.

This section discusses the other components involved in motivation to learn a second language. Motivation is responsible for some of the individual differences in second-language acquisition in the Socio-Educational Model (Gardner, 1985a). Motivation is conceptualized in this study as a composite score of: (a) favorable attitudes to learn, (b) effort expended to achieve the goal (motivational intensity), and (c) a desire to achieve the goal (Gardner, 1985a). This conceptualization of motivation is more complete because it includes an effective element, attitude; a behavioral element, the students’ self-reported effort; and a cognitive element, the desire to learn the language. These three components of motivation, attitude, desire, and intensity to learn the second language, have been found to correlate with each other (Gardner, 1985a).

Attitudes Toward the Learning Situation

Attitudes toward the “learning situation” refer to the affective reactions toward the language-learning learning experience. This concept involves the attitudes toward the teacher, the class, the school, the textbooks, and the laboratory, which are directly related to the formal language-learning situation. It is measured in the A/MBT by (a) the teacher and (b) the language class or course of second-language learning.
Both of these components refer to formal language study while the studies dealing with attitudes and motivation frequently investigate both of these components simultaneously as the other components in this review of the literature (Baker, 1996; Clement, 1980; Dornyei, 1994, 1998; Gardner, 1985a; Massey, 1986; Muchnick & Wolfe, 1982; Ramage, 1990).

In Gardner’s (1975, as cited in Stern, 1984) model of motivational characteristics, one of the four main categories is a course-related characteristic. This component includes attitudes toward learning the second language, attitudes toward the second-language course and teacher, and second-language classroom anxiety.

These educational attitudes (attitude toward the second language, evaluation of language course and teacher) are discussed as a cluster rather than as individual variables because they are interrelated and reflect the sum of a student’s reactions to the language-learning situation. Although classroom anxiety and educational attitudes are closely related, they are discussed separately in the research literature.

Gardner (1985a) concludes, “It seems clear, therefore, that attitude measures account for a significant and meaningful proportion of the variance in second-language achievement and that some attitude variables are more relevant than others” (p. 50).

Other studies have focused on the effect of the learning situation on the attitude and motivation the learner initially brings (Bacon & Finnemann, 1990; Gardner et al., 1976; Massey, 1986; Muchnick & Wolfe, 1982).

Massey (1986) studied adolescent students’ attitudes toward and motivation to learn French as a second language. He focused on the variation and nature of these attitudes in urban and rural public schools. The results indicated the students’ attitudes
and motivation decreased over time and that the principal factor for change was "what happened day by day in class" (p. 616).

Muchnick and Wolfe (1982) investigated American high-school students' attitudes and motivation to learn Spanish. Similar to Massey (1986), this study revealed that the actual learning situation (evaluated negatively by the students) is different from their own report of positive attitudes and motivation. These researchers found it "disconcerting to note that positive attitudes and motivations for the acquisition of Spanish are associated with negative concepts of teacher and course" (p. 279).

Bacon and Finnemann (1990) contend that American university students' unwillingness to deal with input in the new language within the classroom underlies their motivation to learn the language. These researchers found that oral input in the target language was less related to evaluation of the language course, but was related to language learning anxiety.

Classroom Anxiety

Empirical research on second-language anxiety in the classroom usually takes the form of correlation studies. Various researchers have investigated this issue (Horowitz, Horowitz & Cope, 1986; MacIntyre & Gardner, 1989, 1991; Scovel, 1978).

Nevertheless, this issue has provided mixed results as to the negative or positive effect that anxiety has on second-language acquisition. Young (1990) contends that the source of students' classroom anxiety has more to do with speaking in front of a class rather than speaking the second language. On the other hand, Bacon (1990) contends that the source of students' unwillingness to deal with oral input in the target language is
related to language-learning anxiety. Horowitz, Horowitz & Cope (1986) in review states that all types of anxiety do not seem to affect second-language learning. Scovel (1978) reviewed a number of studies investigating the relationship between anxiety and second-language performance and found evidences for positive, negative, and no relationships. Based on his findings he proposed that there might be two types of anxiety: facilitating and debilitating. Another study found evidence to suggest that anxiety specific to language-learning context tends to be negatively related to second-language achievement (Gardner, 1985a). Horowitz et al. (1986) developed the foreign language Anxiety Scale, assessing components of anxiety (communication apprehension, test anxiety, and fear of negative evaluations). Other researchers have developed measures of language anxiety also. Examples of such measures are The French Class Anxiety Scale (Clement, Gardner, & Smythe, 1977) and The Anxometer (MacIntyre & Gardner, 1991) argues that anxiety is negatively related to achievement in second-language learning.

**Historical Background of English in Puerto Rico**

Soon after the Spanish-American War in 1898, Puerto Rico became an American territory and the teaching of English was introduced in the public school system. General John Brooke established the policies for an official language. The official language was English. North American teachers were sent to the island from the mainland, and all teaching was done in English.

Each Commissioner of Education made changes as to the role of English as either a subject or medium of instruction and varied the grades where English was to be introduced. Various authors document and discuss the language policies implemented.
during this time (Canino, 1981; and Osuna, 1949) at length. Negrón de Montilla’s (1977) historical studies present the language policies as having a significant role in the process of the Americanization of Puerto Rico. Viñas de Vázquez (cited in Von Maltitz, 1975) summarizes briefly the major changes in these policies up until 1947.

Dr. Martin Brumbaugh who became commissioner of Education in 1900 introduced the first change. The “Brumbaugh Policy” provided for the teaching of English and Spanish as subjects in the first grade. Spanish was to be used also as the medium of instruction in Grades 1-8, while English was to be the medium of instruction in Grades 9-12. Spanish was to be taught as a special subject in the secondary grades (9-12). Brumbaugh strived to transmit the spirit and ideals of the American people. Teachers were all North Americans, and many of the practices in the USA were copied into the Puerto Rican schools. The lack of English teachers on the island made it impossible to fulfill the requirements of the military government. The Normal schools in Puerto Rico were established during these years, and summer institutes to train teachers were developed.

Samuel McCune Lindsay followed Brumbaugh. He introduced English textbooks in the Puerto Rican classroom and sent the first group of 500 Puerto Rican teachers to study at the University of Cornell and Harvard during 1904. During his time, teachers in Puerto Rico were required to take English tests before entering the teaching profession. Many teachers were opposed to this practice (Negrón Montilla, 1977). Commissioner Roland Falkner (years 1905-1907) introduced the second major change in 1905. He aimed at the use of English as the medium of instruction in all grades of the public school system. This plan was called “The Filipino”. He followed the steps of the language
policy in the Philippines. Textbooks in English were discarded, and Spanish readers were acquired. This impact was of such magnitude that the program continued up to 1916.

Edwin Grant Dexter (1907-1912) continued with the same language policy, but introduced public schools in the rural areas of the island. The majority of the population lived in hilly rural areas. His policy changed Spanish language learning in the first grade to English.

From 1912 to 1915 parents and teachers protested the use of English in schools and founded The Teachers Association whose major concern was language learning. Commissioner Paul Miller introduced the third major change in 1916. Spanish became the language of instruction in Grades 1-4, both English and Spanish in Grade 5, English in the remaining Grades 6-12. The study of both English and Spanish as subjects continued in both elementary and high schools (Lopez, 1998). In 1917, The New Organic Law “Jones Act” was signed and Puerto Ricans participated in World War I with the United States.

After World War I, John Huyke became the first Puerto Rican Education Commissioner. José Padin introduced the fourth change in 1934. He made Spanish the language of instruction at the elementary level (Grades 1-8) and doubled the time devoted to English as a subject from 45 to 90 minutes in the seventh and eighth grades. Law Number 35 of 1913 established that all grades be taught in Spanish. Cebollero argues that this was the uprising of nationalism in the island. Some were called “Separatistas,” those who were not in favor of English as the official Language, and the “Asimilistas,” those in favor of English as the means of instruction in public schools and
the official language on the island. In 1916, the first research on the teaching of English in Puerto Rico, *The Problem of Teaching English in Puerto Rico*, was published.

Dr. Jose Gallardo introduced the fifth change in 1937. It involved a series of policies resulting from an effort to use both English and Spanish as the media of instruction. In elementary schools, some subjects were taught in English and others in the vernacular (Spanish) in elementary school. In 1943, Commissioner Chavez proposed Puerto Rico as a bilingual country. In 1946 legislation required the use of Spanish as a means of instruction in all school levels. It was vetoed.

Commissioner Mariano Villaronga introduced the sixth major change in 1947. He made Spanish the medium of instruction at all levels of the public school system. In 1948, he initiated the English program, which is still in effect today. In 1948, the first governor elected by the people of Puerto Rico, Luis Munoz Marin, named Villaronga Commissioner of Instruction. The matter, which had caused Puerto Rican education so many setbacks, was settled for good. The policy since 1947 has been to teach English as a subject and to use Spanish as the medium of instruction in all of the grades of the public school system beginning in the first grade. In 1969, Ramon Mellado as Secretary of Instruction declared Spanish as the means of instruction and English as a school subject.

The actual linguistic policy continues to be the same: Spanish the means of instruction and English as a subject in all grades. Despite the different language policies, the Puerto Rican student does not seem to become proficient in English. Governor Winship stated, "It is unfortunate that after nearly 40 years of American occupation the quickest and most efficient way of teaching English in the schools of Puerto Rico is still
undetermined and a matter of controversy” (Osuna, 1949, p. 369). Pousada (1996) and Claudio (1995), argue that English has become the center of controversy in Puerto Rico. Access to English education has caused a political, social, and economic divide.

Various factors have been pointed out as affecting the lack of success or resistance to learn English. First, the lack of a sufficient number of qualified English teachers was and still remains a problem. Another reason suggested by the Survey Commission (Osuna, 1949) after a quarter of a century of development is that “more than 80% of the children of Puerto Rico do not remain in school long enough to acquire proficiency in reading, writing and speaking English” (Lopez, 1998, p. 359). Other aspects that characterized the new policy were: (a) strong emphasis in reading in Spanish and in English, (b) study block schedules, (c) integration of science and mathematics, (d) laboratory immersion periods for intermediate and high-school students, (e) teachers’ professional enhancement, (f) teacher-exchange programs, and (g) the review and enrichment of the relationship between instruction and supervision (p. 2).

This controversy continues to exist in the present. According to Perez-Birmingham (1992) in 1985, the Secretary of Education proposed an experiment whereby English would be the means of instruction. This change in policy was not founded on any recent empirical evidence. The Puerto Rico TESOL Research Committee (Farre-Rigau, Candelaria, Hudders, Núñez, Silva, & Van Trieste, 1986) published a statement denouncing this proposal first because the only evidence used for this change was two outdated studies that did not reflect the present-day situation. Second, this change did not consider the research in favor of early bilingualism.
Celeste Benitez (cited in Von Maltitz, 1975) the Secretary of Education in 1973, tried to explain some of the reasons for Puerto Ricans’ ambivalent attitudes toward the learning of English. She suggested that Puerto Ricans had expected more freedom and equality as an American territory than as a Spanish colony. When not given as much autonomy as had been expected, the discontent was focused on the learning of English. Benitez (cited in Von Maltitz, 1975) stated:

A wave of nationalism swept across the island, condemning the language policy as a sign of American imperialism and a menace to the identity of Puerto Ricans. This polarized the situation: those in favor of continued association with the States just as blindly championed the use of English in the classroom. (p. 76)

It is not difficult to understand why students became increasingly ambivalent, even hostile, to the learning of English. Official policy dictated that they study it. They saw the need to speak English in order to get better-paying jobs. And yet, at the same time, they felt that to study English, to speak it, was to deny their identity as Puerto Ricans. Llado Berrios (1978) findings suggest that despite the failure of the teaching of English in Puerto Rico according to his studies, the perception of the need to learn English remains constant. These findings are similar to those conducted by Clachar (1997); Resnick (1993); and Gonzalez (1998).

The result of early linguistic policies in Puerto Rico, with their emphasis on the Americanization of Puerto Ricans, was that the teaching of English in Puerto Rico became a political issue. Perez-Birmingham (1992) argues that, for some advocates in favor of independence for Puerto Rico, learning English in school reinforces the feeling of colonialism and is a tacit acceptance of American domination of our economic development and our close political ties. For some statehood advocates, the mastery of
political integration is essential for the advent of statehood. Cruz (1999), a former Secretary of Education, argues that the problems are due to the practice of inadequate methodology by teachers with poor command of the language and who thus do not show enthusiasm with the language, nor transmit interest to motivate the student. He also mentions that students' lack of success promotes rejection of English as a school subject.

Leibowitz (1971) suggests that the lack of success in English is due to the fact that language policies were imposed: "it was the act of imposition itself which created the reaction" (p. 4). He believes that it has made an imprint on the people of the island and continues to affect "the role of English in the school system which still has status and political overtones in Puerto Rico" (p. 4). To what degree this collective experience has permeated the attitudes of present-day Puerto Rican would certainly is a study in itself. However, from the introduction of English in the public school system, English has been fraught with pedagogical as well as social issues. There are different views regarding the English language and bilingualism in Puerto Rico: some feel it is nonexistent while others feel it is part of the Puerto Rican lifestyle. Canino (1981) argues that there have been vigorous efforts to create a bilingual educational system in Puerto Rico, but they have failed. He contends that fanatics and hypocrites from English- and Spanish-only camps have through the years disported the issue so vigorously that passion and misguided patriotism have ruled. Núñez (1996) feels that there exists in Puerto Rico a resistance to English caused by the fact that many view it as a language being forced upon the island for political purposes only. Some observations may be true for some, but the truth is that not everyone in Puerto Rico is fortunate enough to be bilingual.
The Project to Develop the Bilingual Citizen, a program implanted by the pro-statehood Secretary of Education, Dr. Victor Fajardo, in 1997, was the most recent establishment of model bilingual schools where all children could have access to a two-language education. According to the official document,

The Department of Education proposes to initiate a multidisciplinary, integrated plan that includes several instructional alternatives conducive to the development of bilingual citizens. . . . Students will be able to develop thinking and communication skills in Spanish and English, and will also develop their sensibility. (Departamento de Educación de P. R., 1997, p. 79)

This document describes the need for educational reform in Puerto Rico, which is directly focused on bilingual education as a solution to the limited ESL learners.

Results of fairly recent (1997-1998) statistical findings as reported by the Department of Education in San Sebastian, a small town on the west coast revealed that 80% of the students in the public school system had not developed the basic English language skills to be able to use English effectively in oral or written discourse.

The reality is that the Puerto Rican children are not learning enough English in our public school system. Because of this statement many parents send their children to private schools thinking it makes a difference between the quality of teaching in the public and the private systems. This is one of the reasons why many parents choose to pay the high educational costs charged by a number of private schools to provide a bilingual education for their children. (Pousada, 1996, p. 98)

The Bilingual Citizen Project (1997) proposed several stages to accomplish its goal. The priority for the first stage was the primary level (K-3) in which a dual-language approach would be eliminated in the first three grades. Nevertheless, the Governor decided to cancel the proposed experiment. During 8 months, from the time of the announcement of the experiment until its cancellation, there was much debate as to whether this language policy was in the best interest of the children of Puerto Rico. Many
debates continue to question Fajardo's decision, and studies reveal his ideal would be impossible to establish completely (Vega, 1998).

**Attitudes Studies in Puerto Rico and Methodology**

Various researchers have been interested in the Puerto Ricans' (living on the island) attitudes toward English as a second language (Aloise, 1992; Arus, 1970; Cruz, 1999; Epstein, 1966; Guzmán, 1998; Livoti, 1977; Lladó-Berrios, 1978; Perez-Birmingham, 1992; Van Trieste, 1985/1986; Vega, 1998; Walsh, 1994). Most of these studies are from the University of Puerto Rico, Rio Piedras Campus. Nevertheless, there has not been a consensus as to the role of this affective factor in second-language learning. Van Trieste (1987b) offers four possible reasons for this lack of consensus:

First, the kinds of attitudes investigated vary considerably from study to study. Second, the instruments used to measure attitudes vary so much that it seems safe to state that no two attitude studies in the reference list used the exact same instruments. This, of course, makes comparisons of the results rather difficult and in some cases may even account for contradictory findings. Third, it is unfortunate that many of the studies do not establish the relationship between attitudes and achievement in English. It seems that information on learners' attitudes is of little value unless it helps us to understand the role of attitudes in second-language acquisition/learning. And, lastly, the term "attitude" has rarely been defined and, therefore, means different things to different researchers. (p. 5)

Livoti (1977) used the "ESL Attitudes Inventory," a tool he developed. He investigated variables that may be associated with attitude toward learning English in Puerto Rico. His sample consisted of fifth and eighth-grade public school students. Among the variables that were significantly associated with attitudes to learning English were attitudes toward native speakers of English, teachers who used a great deal of English in the classroom, students who perceived positive parental encouragement, and students who had visited the United States. He also found that "eighth graders are more
positive in their attitudes than fifth graders" (p. 104) and females had higher scores than the male students.

Epstein (1966) is the pioneer researcher in social attitudes in Puerto Rico. He used survey research to investigate the impact the upper or middle class and urban school children show as to determination and desire to learn English, functional aspects of English, and perceptions of English as a symbol of political and economic power. Epstein found "residential and social class factors appear to have little bearing on attitude toward English among pupils of the public schools" (p. 223). He also found public school female pupils "tended to be more favorably inclined than boys toward English" (p. 228). It was expected and revealed by his findings "parochial school pupils display more positive attitudes toward learning English than their public school counterparts" (p. 229). Nevertheless, the public school students expressed a desire to have the amount of English taught increased, whereas the parochial school students had a stronger preference to have English as the medium of instruction. On the other hand, "over half of the public school students and two thirds of their parents expressed a need for more English than is at present offered" (p. 230).

Another difference in his findings were that among the public and parochial students the former thought positive attitudes toward English had "little to do with feelings related to Americanization" (p. 228), whereas the latter "felt more favorably disposed toward Americans and the American culture" (p. 229). In Livoti’s and Epstein’s studies, both educational and social attitudes had a bearing on attitudes toward learning English in Puerto Rico. These studies looked at variables such as age, sex.
residence, and social class, but neither probed students' questions about the attitudes reported.

Other researchers in Puerto Rico have explored learners' attitudes and perceptions through different studies and through a variety of research methodologies such as those conducted by Lladó Berrios in 1978, Vega and Guzman in 1998.

Guzman (1998) provided a measure of attitudes toward ESL reading. Her efforts provided a validated tool that can be used in elementary school children. This is a Likert-type scale of 31 items.

Llado-Berrios (1978), Muñoz (1973), and Van Trieste (1985/1986) have studied the attitudes of elementary school, secondary school, and university students toward English and Spanish speakers in Puerto Rico using the matched-guise technique. Contradictory results were obtained in these three studies concerning the attitudes toward the speakers of English and Spanish. Lladó-Berrios found that Spanish voices were rated more favorably than the English voices, whereas Munoz and Van Trieste found that the English voices were rated significantly higher than the Spanish voices. Lladro Berrios (1978) findings suggest that despite the failure of the teaching of English in Puerto Rico perception of the need to learn English remained constant. These findings are similar to those conducted by Clachar (1997), Lopez (1990), Resnick (1993), and Lopez (1998). Lladro Berrios (1978b) concludes that the attitudes that students may have toward the methods and materials used for the teaching of English do not directly affect their positive attitude toward learning the language.

Research on attitudes toward the reading and writing processes of English in Puerto Rico have been found in studies conducted by Guzman (1998), López (1990), and
Lopez (1998) and Morris (1996) conducted a study through a questionnaire where he analyzed the needs of English teachers on the Island. Likewise, Lopez (1998) findings also argue the need of English teachers to be familiarized with the most recent research of the social psychological implications of learning a second language. She believes that the program of teaching and learning of English is related to attitudes toward English and towards the United States of America.

Van Trieste (1985) suggests that the contradictory results might be explained as follows: Lladó-Berrios (1978) did not use a true matched guise, that is, the speakers of English and Spanish were not the same persons: there were three varieties of English speakers whereas there was only one of Spanish “which might have made the participants more defensive of their native language or more antagonistic to the English voices” (p. 33). He concludes, “attitude toward Americans is not a useful predictor of ESL achievement” (p. 86). He believes this implies that “ESL educators need not be overly concerned about Puerto Rican university students’ attitudes toward Americans since these students seem to have rather positive attitudes toward Americans” (p. 90). This conclusion seems incomplete because rating American speakers higher might imply not only positive attitudes toward Americans, but also might imply negative attitudes or inferiority in relation to the English-speaking community (Perez-Birmingham, 1992). She recommends that it might be necessary to examine the attitudes toward their own cultural group when examining motivational orientations because positive attitudes toward the participants’ own cultural group have been found to facilitate language learning (Gardner & Lambert, 1972; Oller, 1977).
Van Trieste's (1985) survey research design study limited the focus of attitudes toward speakers of the target language as the attitudinal basis that underlies the integrative motive. His findings reveal that attitudes toward Americans did not account for significant variance in ESL achievement (final ESL class assessment).

Perez-Birmingham's (1992) findings are the most relevant to this study because it studies the same population: Puerto Rican first-year university students. The variables tested were attitudes toward the speakers of the second language and educational and social attitudes that might be related to second-language learning in Puerto Rico.

Orientation

Various researchers (Epstein, 1966; Lladó-Berrios, 1978; Van Trieste, 1985/1986; Walsh, 1994) have found that Puerto Rican students are more instrumentally than integratively oriented to learn English. Their research established the relationship between instrumental motivation, integrative orientations, and second language. Lopez (1998) contends that Puerto Rican college students' self-perceived proficiency in the second language is related to instrumental motivation to learn English. This researcher found that instrumental motivation to learn English among these students was related to the value of English in family, friendship, educational, and occupational domains. Walsh's (1994) findings suggest that bilingualism is highly valued as an educational goal by its participants. They perceived a great need to learn English in Puerto Rico; however, this need is assigned to specific purposes. It seems that the majority of these particular learners of ESL in Puerto Rico were not well motivated to learn English. Learners tend to manifest instrumental reasons for learning English. The inconsistencies
found in the research studies cited seem to be linked to the fact that the attitudes and type of orientation are context bound. Furthermore, the type of motivation effective for language learning and the attitudinal basis for this orientation largely depend on the social, cultural, economic, and political settings of the language learner. Gardner (1985a) agrees that both the social and cultural contexts "could drastically influence the nature of the role played by affective variables in second-language acquisition" (p. 97).

Anxiety

Research studies on the relationship between achievement and second-language classroom anxiety have not been conducted in Puerto Rico. Anxiety levels have been part of various questions on surveys and not the most important construct. Perez-Birmingham (1992) worked on a translated version of the A/MTB and measured levels of anxiety with the variable attitudes towards learning English. Anxiety correlated negatively with all the variables in their survey and also negatively with achievement.

McCrosky, Fayer, and Richmond (1985) obtained comparative data about level of anxiety associated with real or anticipated communication among Puerto Rican college students and United States mainland students. The findings revealed that the Puerto Rican students have the highest communication apprehension for speaking their second language, English, and the lowest for speaking their native language, Spanish. This would be expected from students who have been in Puerto Rico as second-language learners.

On the other hand, Delgado-Monge (1986) investigated the relationship between oral communication apprehension and proficiency of Puerto Rican college business
students. She found no significant difference between levels of apprehension and proficiency scores. The major difference in these two studies is that in the first, proficiency was self-rated, and in the second, proficiency was measured by a test of English language proficiency.

The Learning Situation

The learning situation in the Puerto Rican context has been studied in relationship to attitudes toward the ESL methodologies involved in the teaching and learning processes on the island. There are very few studies related to the relationships of ESL teachers or class with achievement. Perez-Birmingham’s study (1992) was the only one that researched the learning situation and its relationship to classroom achievement. Teachers and class variables were divided into different parts in the investigation. This study revealed there were few significant relationships between teachers and class and attitudes towards learning English.

Instruments to Measure Attitudes

In discussions of second-language acquisition, “attitude has come to include conscious mental positions, as well as a full range of subconscious feelings or emotions” (Savigon, 1983, p. 11). Other researchers argue that attitudes, words, and language are the constructs or mental blocks that the learner builds as a result of his or her experiences with the language in question (Walsh, 1994). Both of these positions pose problems for attitude measurement. First, if attitudes are considered as a conscious mental position, the subjects might answer according to what they think is an acceptable answer for the researcher, rather than an honest answer. Also, they might express a value, which they
do not necessarily act upon. Second, if attitude is defined as an unconscious mental state, then expecting the respondents to make conscious what is unconscious is a difficult task. Whether a measure can capture the attitudes about language learning is questionable. Not only is defining attitudes related to second-language learning problematic, but also measuring the attitudes themselves is not a simple task. Other researchers on attitudes also consider the testing of attitudes a difficult task. Perez-Birmingham (1992), Brown and Gonzo (1995) agree in that the uniqueness of each individual and the dynamic qualities of attitudes make this a difficult area to measure scientifically. Methods used to elicit and assess language attitudes have been both direct and indirect. Among the direct techniques used are questionnaires, interviews, and scaling. The best-known indirect method is the matched-guise technique (Lambert, Hodgson, Gardner, & Fillenbaum, 1960). In the matched guise, fluent bilingual speakers are asked to record passages in the two languages under investigation. The subject rates the speakers on characteristics such as intelligence, social class, and friendliness. By focusing on the speakers rather than the language, this method is considered indirect. The subjects believe they have heard twice as many people as they actually have heard. The main advantage of indirect measures is that the subject does not know that his/her language attitudes are being investigated. On the other hand, the matched guise has been criticized because of its artificiality (Giles & Byrne, 1982). The matched-guise technique was chosen despite the limited data that speakers of the second language could generate in many of the studies mentioned below.

Despite the many research studies on attitudes and their relationship between attitude variables and second-language achievement, the measurement of affective
variables have received wide criticism especially by Oller (1977). He notes that the validity of these measures might be influenced by "the tendency to flatter oneself, to seek social approval and the aim to merely be consistent in responding to affective questionnaires" (p. 185). I selected a measurement that has been used and translated and reevaluated many times in and outside of Canada.

This questionnaire that has been widely used in attitudinal research is the Attitude Motivation Test Battery (Gardner, Clement, Smyth, & Smythe, 1979) as well as adapted with French ESL students (Laine, 1977), modified in central America (Gordon, 1980), and adapted with American SSL students (Muchnick & Wolfe, 1982). Much of the research concerned with the role of attitudes and motivation in second-language learning has also derived tests from the A/MTB (Gardner, Lalonde, & Moorcroft, 1985).

Various researchers using the A/MTB or a derivative of it (Gordon, 1980; Laine, 1977; Muchnick & Wolfe, 1982) have demonstrated that the various attitudes and motivation measures are related to each other, are independent of language aptitude, and are related to measures of second-language proficiency (Clement, Gardner, & Smythe, 1977; Gardner & Lambert, 1972; Gardner & Smythe, 1981; Gliksman, 1981).

Achievement has been found to be due partly to attitudinal and motivational characteristics and due partly to language aptitude and the two are independent of each other (Gardner, Lalonde, & Pierson, 1983; Gardner & Lambert, 1972).

The A/MTB consists of three techniques: Likert technique, semantic differential technique, and multiple-choice format. The scales included in this battery of tests are attitudes toward the second-language community, integrative orientation, instrumental orientation, attitude toward the second language: desire to learn the language.
motivational intensity, and evaluation of the language course, evaluation of the language
teacher, parental encouragement, and second-language classroom anxiety.

The ATVITB was chosen for the present investigation because it measures various
educational and social attitudes and allowed me to select students who might have
positive and negative attitudes towards the variables in the study. The scales included in
the ATVITB are mostly of an educational and social nature provided me with a framework
of categories to structure the questions that were used in the interview.

Further probing with the use of interview schedules might better gauge the
subjects' attitudes. Attitudinal and motivational research has relied mostly on the use of
questionnaires, which might force the learner to answer fixed answers. The use of
qualitative data collection techniques such as the interview might minimize the
possibility of accidentally forcing the student to answer in a particular direction. Oller
(1982) has questioned the assessment of attitudes by means of a questionnaire and
interview. They gave students from an exchange program an attitude questionnaire
similar to those developed by Gardner and his colleagues before and after the program.
These researchers found that there was a change in attitude in a positive direction when
measured by the questionnaire. However, in the interviews the participants do not
produce stereotypes as they did in the questionnaire and refuse to generalize about the
first and second-language community group. In order to better gauge the learners'
attitudes and avoid forcing students to answer in a particular direction, this investigation
used a questionnaire.
Summary


Both educational and social attitudes seem to underlie the motivation to learn a second language. Context and individual differences tend to affect the type of attitude, which in turn affects the motivation to learn the second language (Clement & Kruidenier, 1985; Dornyei, 1998; Gardner, 1985a, 1988; Gardner, Smythe, & Clement, 1979; Ramage, 1990). Both types of attitudes have been found to be independent of intelligence and ability (Clement, Gardner, & Smythe, 1977; Gardner, 1985a, 1988; Gardner, Lalonde, & Moorcroft, 1985; Gardner & Smythe, 1975).

Researchers concerned with the effect of attitudes on second-language learning attempt to identify various social factors that could influence motivational orientation, such as positive attitudes toward the second-language community, favorable attitudes toward one's own cultural group, and parental support and encouragement (Bacon & Finnemann, 1990; Cooper & Fishman, 1977; Dornyei, 1994; Lukmani, 1972; Oller, Hudson, & Liu, 1977; Ramage, 1990; Spolsky, 1989).

The educational components underlying a motivation to learn a second language consist of favorable attitudes to learn, effort expended to achieve the goal, and desire to achieve the goal. Favorable attitudes to learn the second language seem to correlate highly with measures of achievement, and these educational components have also been
related to motivation and attitudes toward the language-learning situation (Gardner, 1985a, 1985, 1988; Gardner & Lambert, 1959, 1972; Gardner & Smythe, 1975; Gordon, 1980). Other studies have focused on the effect of the learning situation (formal language study) on the attitudes and motivations to learn the second language (Bacon & Finnemann, 1990; Dornyei, 1994; Gardner, Ginsberg, & Smythe, 1976; Gardner, Smythe, & Brunet, 1977; Massey, 1986; Muchnick & Wolfe, 1982; Ramage, 1990).
CHAPTER III

METHODOLOGY

Introduction

The purpose of this ex post facto study was to investigate whether attitudinal, motivational, and anxiety factors are related to proficiency in English as a second language, as reported by Puerto Rican first-year college students enrolled in the University of Puerto Rico, Mayagüez Campus, school year 2001-2002. In this chapter, the research design used, the population and sample, instrumentation, data collection procedure, the null hypotheses, and techniques for analyzing the data are presented.

Design

This study used the survey research method in which an adapted translated version of the A'MTB (Attitudes Motivation Test Battery) questionnaire by Robert Gardner (1985a) was administered to first-year college students at The University of Puerto Rico, Mayagüez Campus. Data from the survey were then used to examine relationships between English proficiency as measured by the CEEB (College Entrance Examination Board), and motivation, attitudes, and anxiety as measured by the A'MTB.

Population and Sample

The subjects for this study were first-year college students enrolled in freshman English-as-a-second-language courses at the University of Puerto Rico, Mayagüez
Campus. The campus is located on the western part of the island. Participation was requested of all freshman students. However, only those subjects who signed the consent forms were included in the study.

This sample was selected because the students came from all 10 public school regions of the island, and appear to be quite representative of these regions. These regions are North Arecibo, Northeast Bayamón and San Juan, East Fajardo, South Morovis, Southeast, Humacao, Southwest, Ponce, Northwest San Germán, West Mayagüez, Metropolitan area, and Caguas. The Mayagüez Branch of the University of Puerto Rico is primarily an agricultural and engineering institution, and most students who are interested in majoring in agriculture and engineering enroll on this campus. Generally, all first-year college students have had 12 years ESL learning in Puerto Rico.

After being presented with the proposed study, the English Department of the University and its faculty expressed a keen interest in learning more about the attitudes and perceptions of its students. At their request the study was expanded to include all the first-year students in the English department. Therefore, in selecting the sample for this study, a list of students enrolled in ESL classes was obtained from the Registrar’s Office of the University of Puerto Rico-Mayaguez during the 2001-2002 school year. All of the 2,500 students on this list were requested to participate in this study.

Instrumentation

The instrument used in this study was an adapted version of the AMTB (Attitude/Motivation Test Battery; Gardner, 1985a). The translated version in Spanish, “Espejo de Actitudes,” was designed to measure the same concepts as the original.
A MTB. This section includes a description of the A MTB (Gardner, 1985a), original version, and the adaptation for this study in the following areas: (a) development, (b) reliability and validity, (c) development and description of the A MTB adapted translated version, (d) the pilot study, and (e) the validity and reliability of the adapted instrument.

Description of the A/MTB

The Attitude/Motivation Test Battery (A MTB) was developed by Gardner (1958, 1960), and later revised by Gardner and Lambert (1972). The instrument was designed to measure several motivational, attitudinal, and anxiety variables as they relate to the learning of French. These variables include:

1. Attitudes of French Canadians
2. Interest in Foreign Languages
3. Attitudes Toward European French People
4. Attitudes Toward Learning French
5. Integrative Orientation
6. Instrumental Orientation
7. French-Class Anxiety
8. Parental Encouragement
9. Motivational Intensity
10. Desire to Learn French
11. Orientation Index
12. French-Teacher Evaluation
13. French-Teacher Rapport
14. French-Teacher Competence
15. French-Teacher Inspiration
16. French-Course Evaluation
17. French-Course Difficulty
18. French-Course Utility
19. English-Course Interest.

Eleven of these 19 measurements are used in the formation of four composite indices: Integrativeness Index, Motivation Index, Attitudes Toward Learning Situation Index, and Attitudinal/Motivational Index (see Appendix B).

Development of the A/MTB

Empirical research on the role of attitudes and motivation in second-language learning has focused on several measures. Gardner's initial studies found that individual orientation to learning French as a second language was related to his or her motivation to learn French, attitudes toward French Canadians, and proficiency in French (Gardner, Tremblay & Masgoret, 1997). There have been many models proposed to account for these relationships but the present study is based on the Original Socio-Educational Model proposed by Gardner (1985a) and the Attitude/Motivation Test Battery that is used to assess the major variables in that model.

According to Gardner in “The Attitudes/Motivation Test Battery: Technical Report” (1985b). The Attitude/Motivation Test Battery was validated and standardized on samples of Anglophone Canadian students in Grades 7 to 11. These samples were drawn from seven regions across Canada and consisted of approximately 1,000 students.
at each grade level. Although every attempt was made to obtain representative samples of students in each region, practical considerations required that intact classes be used, and representatives of the school boards involved made the final decisions concerning which classes and schools were included.

The Attitude Motivation Test Battery is a research instrument, which has been developed to assess the major affective components shown to be involved in second-language learning. To date, its major applications have involved investigations of (a) the correlations of subtests and composite test scores with indices of language achievement and behavioral intentions to continue language study, (b) the effects of specific programs, excursions, etc., on attitudinal/motivational characteristics, and (c) the relation of attitudes and motivation to classroom behavior. It provides a reliable and valid index of the various attitudinal motivational characteristics, which researchers may wish to investigate in many different contexts.

The Attitude Motivation Test Battery is comprised of scales assessing the individual's affective reactions toward various groups, individuals, and concepts associated with second-language acquisition. Scores on subtests represent attitudes inferred on the basis of individuals' opinions about specific items, and it is possible that students may give answers that they feel are desirable or "correct." In the development stages of the A MTB, Gardner and Smythe (1981) report that they initially attempted to identify a list of all the factors that could influence an individual's motivational orientation (Perez-Birmingham, 1992). Among the factors included in the Canadian context are: Attitudes Toward European French people, Interest in foreign languages, Integrative orientation, Motivational intensity, Desire to learn French, Attitudes Toward
learning French. French teaching evaluation, French course evaluation, Instrumental orientation, and French class anxiety.

In order to develop measures with content validity, the authors defined the constructs, identified its elements, and chose a specific method of test construction to be used with each construct before developing representative items for each construct.

The Likert scale was chosen for many items because it "has been shown to produce higher reliability coefficients than other procedures" (Gardner & Smythe, 1981, p. 520). The semantic differential technique (SDT) was used to make evaluative statements about the language course and teacher. It was chosen because representatives of the educational institutions found this technique to be less objectionable for evaluative statements than Likert-type items. Last, a multiple-choice-type format was chosen to measure motivational intensity and desire to learn the language because this measure was not directly dealing with beliefs, but rather instances or levels of constructs.

**Reliability and Validity of the A/MTB**

An internal consistency table of the A/MTB is presented in Appendix B. This table shows a total of 32 Cronbach coefficients for all scales except Parental encouragement. Earlier research with this scale demonstrated internal consistency estimates of .91 and a test/retest reliability of .79. There is considerable evidence to demonstrate the high levels of internal consistency of the A/MTB scales. The reliability of these measures was 0.70 or greater (Clement et al., 1980; Gardner & Smythe 1979; Gardner et al., 1997; Gliksman, 1981). Median test-retest reliability coefficients have been greater than .75 (Gardner & Smythe, 1981).
Gardner and Gliksman (1982) were also concerned with the construct validity of the A/MTB. They discuss two types of construct validity as they pertain to this measure. The first type is discriminate validity, which requires that the measure in question correlate with the other measures based on the theoretical formulation. Discriminate validity is based on various factor analysis studies (Gardner & Lambert, 1972; Gardner & Smythe, 1981; Gardner et al., 1977; Gliksman, 1981), which have demonstrated that the variables aptitude and attitude motivation are independent. The results of these studies have demonstrated that "the discriminate validity of the A/MTB is better for attitude motivation than language aptitude" (Gardner & Gliksman, 1982, p. 197).

A second type of construct validity, convergent validity, has been assessed using factor analyses in order to determine whether the various measures relate to one another. These analyses were conducted in the developmental study of the A/MTB (Gardner, 1975) and were conducted separately for each grade level in order to determine the consistency of the relationship between the scales. Stable relationships among the different measures in five grade levels were found. This serves to demonstrate the construct validity of the measure and high relationship among many of the attitude and motivation measures.

Construct validation involved a series of operations designed to determine the psychological reality of the variables. The method establishing construct validity used was the demonstration of the convergent and discriminate validity of the scale.
Development of the A/MTB Adapted Translated Version, “Espejo de Actitudes”

For the present study a translation of Gardner’s (1985a) version of the A/MTB was used. The items comprising the adapted translated variation are reproduced with modifications in Appendix A. Validity was established by using back-translation with the help of the professionals in the Department of Humanities at the Adventist University of the Antilles in Mayagüez, Puerto Rico. A group of Spanish-language teaching professionals provided the translation to Spanish. English professors translated it back to English. This process was repeated twice to ensure validity.

The adapted translated version “Espejo de Actitudes” was developed to measure attitudinal, motivational, and anxiety attributes believed to be associated with the learning of English in Puerto Rico. Though not included in the earlier version of the A/MTB, situational anxiety is included in the present study, as there appears to be evidence that this variable is related to the learning of a second language (Scovel, 1978).

All the variables belong to one of four general categories: Attitudes Toward the Learning Situation Index, Integrativeness Index, Motivation Index, and Language Anxiety. The category of Attitudes Toward the Learning Situation Index reflects the student’s evaluation of formal ESL instruction in Puerto Rico and is assessed by two scales: Evaluation of the English Teachers in the past and the Evaluation of the English Classes in the past. Integrativeness Index refers to the student’s willingness and interest in having social interaction with members of the second-language group, which are North Americans. Three scales assess it: Attitudes Toward Americans, Interest in Foreign Languages, and an Integrative Orientation Toward learning the language. Motivation is
conceptualized as a composite of the individual's Desire to learn the language. Attitudes toward learning the language, and Motivational intensity (the effort expended to learn the language). Language Anxiety Index refers to the individual's apprehension in the language class or setting where the language is used. English Class Anxiety and English Use Anxiety scales measure this. The composite scale used is called Anxiety.

**Description of the A/MTB Adapted Translated Version**  
**From Gardner's Original A/MTB.**

The adapted version of the A/MTB consists of 179 items. The first part asks the respondents to describe themselves in several demographic variables. The other parts measure the following:

1. **Attitude Toward Americans:** This scale consists of 10 positively worded items about North American people in Puerto Rico and in the USA. A high score on this measure (maximum = 70) indicates positive attitudes toward speakers of American English.

2. **Interest in Foreign Languages:** This measure consists of 10 positively worded items (maximum = 70) designed to assess the subjects' general interest in studying foreign languages in Puerto Rico. No specific language is mentioned in these items.

3. **Attitude Toward Foreign People:** This scale consists of 10 positively worded statements about Cubans, Dominicans, West Indians, and other foreign people who live on the island. A high score on this scale (maximum = 70) indicates a positive attitude toward foreign people.
4. Attitudes Toward Learning English: This is a 10-item scale adapted from Randhawa & Korpan (1973). Five of the items are positively worded, while five express negative sentiments. A high score (maximum = 70) indicates a positive attitude toward learning English.

5. Integrative Orientation: The four items in this scale emphasize the importance of learning English in order to permit social interaction with Americans or others who speak English. A high score on this scale (maximum = 28) indicates that a student endorses integrative reasons for studying English.

6. Instrumental Orientation: In this scale students are presented with 4 items which stress the pragmatic or utilitarian value of learning English. A high score (maximum = 28) indicates that the student endorses instrumental reasons for learning English.

7. English Class Anxiety: A five-item scale was used. A high score (maximum = 35) reflects subject's degree of discomfort while participating in English class.

8. English Use Anxiety: A five-item scale with a high score (maximum = 35) reflects subject's degree of discomfort while using English.

9. Parental Encouragement: These 10 positively worded items assess the extent to which students feel their parents support them in their English study. A high score (maximum = 70) indicates a high level of perceived parental encouragement.

Three subtests are presented in the form of a multiple-choice test in which student's circle the alternative they feel best describes them. The items for the three subtests are presented in a random order. The three subtests are:
1. **Motivational Intensity**: This measure consists of 10 multiple-choice items which are designed to measure the intensity of a student's motivation to learn English in terms of work done for classroom assignments, future plans to make use of and study the language, etc. A high score represents a student's self-report of a high degree of effort being spent in acquiring the language.

2. **Desire to Learn English**: Ten multiple-choice items (maximum score = 30) are included in this scale with a high score expressing a strong desire to learn English.

3. **Anxiety Index**: This subtest consists of two scales: English Class anxiety and English Use anxiety. Each part consists of five items. These two scales measure the student's apprehension in using the language in and out of the class. A five-item scale with a high score (maximum = 35) reflects subject's degree of discomfort while using English.

Eight subtests are assessed by means of a semantic differential format. The concepts, My English Teachers and My English Course, in the past are each rated on 25 semantic differential scales (see Appendix A), and for each concept four scores are derived. These are:

1. **Evaluation of English Teachers**: The ratings on 10 evaluative scales are summed to reflect students' general evaluative reactions to their English teachers in school experiences. The items are scored in the direction indicated below such that a high score (maximum = 70) indicates a positive evaluation. The evaluative scales are unfriendly-friendly, unreliable-reliable, inconsiderate-considerate, bad-good, unpleasant-pleasant, inefficient-efficient, impolite-polite, insincere-sincere, undependable-dependable, and cheerless-cheerful.
2. English Teacher-Rapport: Five scales measure teacher-pupil rapport. The higher the score (maximum = 35) on this subtest, the greater the perceived rapport and warmth of the teacher. The scales, keyed in the "rapport" direction, are suspicious-trusting, insensitive-sensitive, unapproachable-approachable, impatient-patient, and disinterested-interested.

3. English Teacher-Competence: This scale measures the students' perception of their teacher's competence. A high score (maximum = 35) reflects a high degree of perceived competence. The scales are disorganized-organized, unindustrious-industrious, unintelligent-intelligent, incapable-capable, and incompetent-competent.

4. English Teacher-Inspiration: Subjects rate the extent to which they feel that their teachers inspire them to learn English. Five scales comprise this measure. High scores (maximum = 35) are indicative of high levels of inspiration and interest. The scales are colorless-colorful, unimaginative-imaginative, dull-exciting, tedious-fascinating, and boring-interesting.

5. Evaluation of English Classes: Subjects' general evaluative reactions to the English course are assessed with 10 scales scored such that the higher the score (maximum = 70), the more positive a subject's evaluation of the course. The scales are bad-good, disagreeable-agreeable, painful-pleasant, unenjoyable-enjoyable, unrewarding-rewarding, worthless-valuable, and unappealing-appealing (keyed positively).

6. English Class-Difficulty: Ratings on five scales are summed to provide an estimate (maximum = 35) of the perceived difficulty of the course. They are simple-complicated, elementary-complex, effortless-hard, clear confusing, and easy-difficult.
7. English Class-Utility: Five scales comprise this subtest. A high score (maximum = 35) is associated with a high level of perceived utility. The scales are noneducational-educational, meaningless-meaningful, unnecessary-necessary, useless-useful, and unimportant-important.

8. English Class-Interest: Five scales are summed such that the higher the score (maximum = 35), the more interest subjects had in the course. The scales are tedious-fascinating, monotonous-absorbing, boring-interesting, dull-exciting, and colorless-colorful.

Eleven of these 19 measures are used in the formation of four composite indices. These composite scores are as follows:

1. Integrativeness Index: This index reflects affective reactions of the individual toward Americans and his/her general interest in other languages. This is intended to assess attitudinal reactions applicable to the learning of a second language, which involves the other-language community or other groups in general. It comprises the sum of scores on the following scales: Attitudes toward Americans, Attitudes toward foreign people (if appropriate or required), ratings of an Integrative Orientation, and Interest in foreign languages.

2. Motivation Index: This is an index of the individual’s motivation to learn English. It incorporates the three-part conception of motivation consisting of the effort expended in learning English, the desire to learn English, and affective reactions toward learning English. The index is the sum of scores on Motivational Intensity, Desire to Learn English, and Attitudes Toward Learning English.
3. Attitudes Toward the Learning Situation Index: This is an index of the student's reactions to the language-learning context. It is intended to assess students' attitudes toward the context in which languages are taught and is the sum of students' evaluations of the English Teacher and the English Class.

4. Anxiety Index: This is an index of the students' degree of discomfort while participating in the English Class or using the language outside the classroom.

I chose the A/MTB primarily for three reasons. First, the instrument appears to measure variables that are related to second-language learning (Gardner et al., 1997). Second, the technical quality looks promising (Gardner, 1985a). And finally, I believed that the A/MTB (Perez-Birmingham, 1992) might be an effective measurement tool that ESL teachers in Puerto Rico can use to assess students' feelings, beliefs, and attitudes towards the language-learning situation in the Puerto Rican schools.

Pilot of "Espejo de Actitudes" A/MTB Adapted Translated Version

A pilot test of the adapted translated version of the A/MTB was conducted to evaluate the clarity of the language, as well as the meaning of the items, and the time allotted for answering the questionnaire. The instrument was administered to a sample of 35 students who willingly accepted to participate. These were first-year college students at the Antillean Adventist University in Mayagüez. Students enrolled at this university are demographically similar to the students in the main study. They were also willing to serve as the pilot sample for this study.
Pilot Procedure

The pilot study was carried out prior to the collection of data for the main study. The pilot study was designed to make sure that respondents understand the items and the instruction for completing the questionnaire.

As a result of administering the adapted translated version of the A/MTB in the pilot study, the time required to complete the questionnaire was changed to 50 minutes. This was done in order to avoid test-taking fatigue and unanswered sections in the major study. The instructions were reworded. The instructions were read to the students while administering the questionnaire. The instructions in the semantic differential section were not clear and were reworded. Students commented that it was difficult to respond to some of the demographic questions. Therefore to avoid unanswered questions in the demographic section, multiple-choice questions of family income and years spent in the USA were added to this section.

Table 1 presents the coefficient Alpha for each of the variables on the basis of the pilot study. Reliability coefficients range from a low of 0.64 for Desire to Learn English, to a high of 0.94 for Evaluation of English Classes. These estimates appear adequate for this type of measure.

Validation of the A/MTB Translated Version

Four experts validated the translated and adapted version of the A/MTB in terms of: (a) translation, (b) item validity, (c) scoring procedures, (d) appropriateness of the items for the population in this study, and (e) ability to implement the instrument.
Table 1

*Coefficient Alpha for the A MTB-Pilot Testing*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Subscale</th>
<th>No. of Items</th>
<th>$n$</th>
<th>Alpha</th>
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<td>Integrative Index</td>
<td>Attitudes in Foreign Languages</td>
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<td>.8857</td>
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<td>Integrative Index</td>
<td>Interest in Foreign Languages</td>
<td>10</td>
<td>35</td>
<td>.8570</td>
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<td>Integrative Index</td>
<td>Integrative Orientation</td>
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<td>35</td>
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<td>35</td>
<td>.9400</td>
</tr>
<tr>
<td>Evaluation of English Classes</td>
<td>Evaluation of English Teachers</td>
<td>25</td>
<td>35</td>
<td>.9430</td>
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<td>Teacher Inspiration</td>
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<td>Class Interest</td>
<td>Class Interest</td>
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<td>35</td>
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<td></td>
<td>English Use Anxiety</td>
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<td>35</td>
<td>.9348</td>
</tr>
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</table>
The experts were the following professors:

David Vélez, Ph.D., Chair of the Humanities Department, Antillean Adventist University, Mayagüez, Puerto Rico. Leroy Miller, M.A., ESL Professor at Antillean Adventist University, Mayagüez, Puerto Rico. Ruben Rosado, Ph.D., Professor of Psychology and Research, “Universidad Sagrado Corazón,” San Juan, Puerto Rico. Zaida Alvarez, M.A., Professor of Education (Spanish) at Antillean Adventist University, Mayagüez, Puerto Rico.

These professionals were given a translated questionnaire “Espejo de Actitudes” A MTB, a permission request found in Appendix D, description and scoring procedures, the English version of the A MTB, and a description of the students who would answer the questionnaire. They were to validate this measure in terms of: translation, construct validity of the items for each category, appropriateness of the items for the population, ability to administer instrument, and the scoring procedures. As a result of the comments of the validations, wording changes were made. information that should be included in the first page of the questionnaire concerning no relationship with political issues in the study was added to the introduction, and some translations were reworded. Translation from English to Spanish, and from Spanish to English was done twice. The “Espejo de Actitudes” (translated adapted version of the A MTB) was developed in the Printing Press of Antillean Adventist University. I designed the graphic arts of the instrument. The graphic arts can be seen in Appendix A. It was translated to Spanish because it is the native language of subjects, and in order to make sure that they would understand the meaning, language, and cultural references of the items. It was then back-translated to English. After two translations were obtained, a third translation of some of the items...
was recommended by the Research Department of the School of Medicine and Research Department Specialist at the University of Puerto Rico at Rio Piedras. The comparisons of the three translations were submitted to a committee of second-language teaching professors at the Humanities Department of the Adventist University. When any discrepancy between the three translated versions occurred, the best translation was determined by comparing the versions with the original version found in Gardner’s version (1985a). This copy was then submitted to the printing press.

Permission to use the AMTB, adapt this measure to the Puerto Rican social context, and translate it into Spanish was requested from Dr. Robert Gardner from Western Ontario University in Canada. Permission was granted (see Appendix C).

Reliability of the AMTB Translated Version

Table 2 presents for the reliability estimates (Cronbach’s Alpha) for all the scales. Cronbach’s Alpha coefficient assesses the degree of homogeneity of the items within each scale and indicates the extent to which each scale is internally consistent. Inspection of Table 2 shows that, in general, the internal consistency reliability of the majority of scales was substantial. The reliability estimates range from a low of 0.65 for Desire to Learn English to a high of 0.95 for Evaluation of English Classes. Approximately 90% of the reliability exceeds the value of 0.70. These estimates appear adequate for such an instrument.
Table 2

Coefficient Alpha for the A-MTB-Translated Version

<table>
<thead>
<tr>
<th>Scale</th>
<th>Subscale</th>
<th>No. of Items</th>
<th>n</th>
<th>Alpha</th>
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<tr>
<td>Integrative Index</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attitude Toward Americans</td>
<td>10</td>
<td>1893</td>
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<tr>
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<td>1952</td>
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</tr>
<tr>
<td></td>
<td>Interest in Foreign Languages</td>
<td>10</td>
<td>1976</td>
<td>.8476</td>
</tr>
<tr>
<td></td>
<td>Integrative Orientation</td>
<td>4</td>
<td>1993</td>
<td>.7637</td>
</tr>
<tr>
<td>The Learning Situation Index</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evaluation of English Teachers</td>
<td>25</td>
<td>1977</td>
<td>.9412</td>
</tr>
<tr>
<td></td>
<td>Evaluation of English Classes</td>
<td>25</td>
<td>1934</td>
<td>.9457</td>
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<td>Teacher Evaluation</td>
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<td>1825</td>
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<td>Teacher Inspiration</td>
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<td>.7454</td>
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<td>Evaluation of English Classes</td>
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<td>Class Evaluation</td>
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<td>Class Difficulty</td>
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<td>Class Utility</td>
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<td>1861</td>
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<tr>
<td></td>
<td>Class Interest</td>
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<td>1861</td>
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<td>Instrumental Orientation</td>
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<td></td>
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<td></td>
<td></td>
</tr>
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<td>Anxiety</td>
<td>English Class Anxiety</td>
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<tr>
<td></td>
<td>English Use Anxiety</td>
<td>4</td>
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<td>.9413</td>
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</table>
College Entrance Examination Board (CEEB)

The College Entrance Examination Board offers six different assessment tools to the schools in Puerto Rico. The six different types of tests are: "PIENSE I and PIENSE II, Inventario CEPA, ELASH, "Programa de Nivel Avanzado," and The "PEAU." This last one is used as the National Assessment Tool for Admissions to all Universities in Puerto Rico, it is also called "PAA." (Prueba de Aptitud Académica). It is used to test academic achievement in the basic areas of Spanish, English, and Mathematics of high-school students. It is divided into three separate tests: (PAA) Mathematics, (PAA) Spanish, and the ESL Achievement test, called ESLAT (English as a Second Language Achievement Test). This last one assesses ESL language learning in all students who are non-native speakers of English. The first test included in the PAA assessment includes: reasoning skills, correct language, analysis, logic, and identification of concepts and reading comprehension through written form. The second test, called the ESLAT, assesses reading comprehension, grammar, and correct usage of second-language learning skills. The test is graded in two parts: grammar and reading. The results range from 200 to 800 points. The total scores are converted to percentile. The raw scores in each part are used for placement of first-year college students in Math, Spanish, and ESL courses. In Puerto Rico students and universities use the terms PAA and ESLAT interchangeably with CEEB. All the subjects used in this study willingly provided their raw score in the ESLAT (CEEB).
Procedures and Data Collection Techniques

This section describes the procedures used in: (a) getting the permission to do the study in a university of the country, and gaining the university's cooperation, (b) permission to use the A/MTB, (c) administration of the instrument and, (d) data collection processes.

I submitted a written request for permission to all sectors involved in the study (Appendix C). Permission to conduct the study (see Appendix C) using their population of first-year college students, during the first semester of 2001-2002, was granted by the Academic Dean at the University of PR, Mayaguez Campus, Dr. Rene Vieta. The Dean referred the matter to the English Department Chair, Dr. Jose Irizarry. The Chair granted permission to conduct the study on September 24, 2002, and the faculty willingly accepted to participate in the data collection process.

Data Collection Procedure

First-year university students were recruited from five different ESL levels at the University of Puerto Rico, Mayaguez Campus. The particular levels were chosen because my intention was to have subjects recall past ESL teaching and learning experience, past experiences in the community and home, and relate these experiences to their College Board Entrance Examination Scores by which they are placed.

Following the selection of students, I met with faculty members to provide information on the study. The meetings included information on the purpose of the study, as well as recruitment and data collection procedures. Faculty who willingly accepted participation was reminded that the students were participating strictly on a
volunteer basis (see Appendix D). Participants were to be reminded that they should
dedicate uninterrupted time to the test. Disruptive behavior on the part of students, such
as talking or making unnecessary noise, was to be discouraged. Failing this, the student
should be asked quietly to leave the room. Any extraneous noise or disruption could
influence students' answers. Should questions be asked about the meaning of a particular
item, it was important that the examiner's answers remain within the meaning and, as far
as possible, within the vocabulary of the printed item. If it was necessary to explain a
particular item, it is best to stay as close to the original item as possible. Of course, care
should be taken not to influence the student to respond in any particular way.

Each faculty participant was again oriented upon receipt of the packet of testing
materials. The questionnaires were given to each faculty member in self-contained
envelopes which contained instructions, a short demographic survey, a ruler, an answer
sheet, and the permission form. At the time of testing the faculty instructors explained to
the subjects the nature of the research project and distributed permission request forms;
these were reviewed and signed on a volunteer basis. Faculty of the University were also
to assure the volunteers that they would not be identified and that the researcher (not the
faculty who teach them) would be the only one to open their completed questionnaire
once handed in. The instructors and subjects filled out the demographic part together.
Subjects then completed the other nine parts of the instrument separately without
comparing or discussing answers. All testing took place in the subjects' regular ESL
classrooms. Subjects were administered the test "Espejo de Actitudes sobre la
Enseñanza de Inglés en Puerto Rico" (adapted translated version of the A/MTB).
Permission requests and answer sheets are contained in Appendix D and E). The test

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took approximately 45 to 50 minutes, as allotted testing time by the English Department Chair, Dr. Jose Irizarry. After completion, the demographic and the nine-part instrument questionnaires were sealed in their original envelope and returned me unopened.

**Treatment of the Data**

Each item in the A.MTB (translated version, Gardner, 1985a) received one of seven responses labeled 1-7, where 1 = strongly disagree, and 7 = strongly agree. There were 10 parts to this instrument, Part 4 having 5 subparts. The questionnaire had a total of 14 parts all together. Students' responses were entered into the data and a scaled score was determined for each individual based on the composite of items on each part.

The first section of the questionnaire requested demographic information on gender, township, ethnicity, schools attended, family income, parents, civil state, level of ESL course, and various questions of general information of linguistic engagement. This section was stated as optional, with a statement by the faculty that it was needed for statistical purposes and would help the researcher understand more about the participants. Township, school attended, general questions about language use, and incomes were presented in grouped intervals (e.g., Aguadilla, Aguada, Bayamón). Ethnicity is also potentially sensitive and poses wording problems. Items that were included to collect demographic information were coded differently (Appendix A).

Students willingly wrote their CEEB scores on the first page of the questionnaire. These were requested and entered in order to have each subject’s achievement level in ESL performance for the past 12 years of ESL teaching and learning experience on the island. These were standard scores that allowed for comparisons between scores derived...
from different scales in the A-MTB. Levels of English proficiency at the University of Puerto Rico use the CEEB scores to identify students.

**Analysis of Data**

Descriptive statistics (e.g., means, standard deviations) were obtained from the data for all levels. The groupings that were obtained were level 1 Pre-Basic, level 2 Pre-Basic 2, level 3 Basic 1, level 4, Intermediate 1. Scaled scores for each of the parts indicated on the questionnaire were computed. Therefore each student had 19 scaled scores for the A-MTB (Gardner, 1985a), one each for Attitude Toward Foreign People, Interest in Foreign Languages, Integrative Orientation, Instrumental Orientation, Attitude Toward Americans, English Teacher Evaluation, which included four subscales. Evaluation of English Classes, which included four subscales, Motivational Intensity, Desire to Learn English, Attitudes Toward Learning English, Anxiety, which included English Class Anxiety, English Use Anxiety, and Parental Encouragement. There was variation in the sample size for some scales because some subjects were missing various single responses. The value of alpha was set at .05 for all tests of significance. All analysis was performed using the Statistical Package for the Social Sciences (SPSS), (Nie, Hull Jenkins, Steinbrenner, & Bent, 1990), edition 9.3. Data-checking activities included running subprogram `FREQUENCIES` to check on variance distributions and plotting distributions.

A comparison of mean correlations of the 19-predictor variables with one criterion answered the majority of questions. Means and standard deviations of each of
the subscales were calculated. The means and standard deviations of the measures of achievement (CEEB scores) were also calculated.

**Null Hypotheses**

The following null hypotheses were tested. All hypotheses were tested at the 0.05 level of significance.

Hypothesis 1. There is no linear correlation between measures of the Motivation Index, Attitudes Toward the Learning Situation Index, and Integrativeness Index. Multiple regressions were performed on the data from the entire sample.

Hypothesis 2. There is no linear correlation between Parental Encouragement, English Class Anxiety, English Use Anxiety and the Motivation Index. Multiple regressions were performed on the data from the entire sample.

Hypothesis 3. There is no linear correlation between the Learning Situation Index and the Integrativeness Index. Canonical Correlation was performed on the data from the entire sample.

Hypothesis 4. There is no linear correlation between The Learning Situation Index, Integrativeness Index, the Motivation Index, and CEEB scores? Multiple regression analysis was performed on the data from the entire sample.

Hypothesis 5. There is no linear correlation between measures of Attitudes Toward Americans, Attitudes Toward Foreign People, Attitudes Toward Foreign Language, Integrative Orientation, Teachers, Class, Desire to Learn English, Motivational Intensity, and Attitudes Toward Learning English? Canonical correlations were performed on the data from the entire sample.
Hypothesis 6. There is no linear correlation between Anxiety Class, Anxiety Use, Parental Encouragement, Instrumental Orientation, and Desire to Learn English, Motivational Intensity, and Attitudes Towards Learning English. Canonical correlations were performed on the data from the entire sample.

Hypothesis 7. There is no linear correlation between CEEB scores and the following subscales:

a. Attitude Toward Foreign People
b. Interest in Foreign Languages
c. Integrative Orientation
d. Instrumental Orientation
e. Attitude Toward Americans
f. Evaluation of English Teachers
g. Evaluation of English Class
h. Motivational Intensity
i. Desire to Learn English
j. Attitudes Toward Learning English
k. English Class Anxiety
l. English Use Anxiety
m. Parental Encouragement.

Chapter Summary

This chapter presented an explanation of the design of the study, a description of the population and sample, the procedure used to select the sample, and sample size. The
A/MTB Test Battery (Gardner, 1985a) used was described, and validity and reliability coefficients were presented. The pilot instrument and reliability coefficients obtained in the study were presented. The A/MTB Adapted Translated Test Battery was also described, and validity and reliability coefficients obtained in the study were presented. This chapter also outlined the procedures followed for the administration of the instrument and collection of data. Finally, the research questions were stated, and descriptions of the statistical analysis to be used for each hypothesis were included.
CHAPTER IV

ANALYSIS OF DATA

This study was undertaken to determine whether attitudinal, motivational, and anxiety factors are related to proficiency in English as a second language as reported by Puerto Rican first-year college students enrolled in the University of Puerto Rico, Mayagüez Campus, during the 2001-2002 school year. This chapter presents the description of the sample and the results of testing the hypotheses.

Demographic Data Sample

In all, 2,500 students participated in the study. Of that number, 492 were removed from the sample because: (a) some had large amounts of missing data; (b) some were in their second semester of English class; (c) many were repeating the course, hence providing only partial information; and (d) some had not studied in Puerto Rico. Using these criteria for exclusion, the final sample for the study was 2,008 subjects from four different ESL course levels.

Table 3 provides information on the breakdown by gender. There were 990 (49.3%) females and 1,014 (50.5%) males in the sample. Four did not indicate their gender. Table 4 provides information on the breakdown of the subjects by age. Most (91.3%) of the subjects were between the ages of 17 to 19.
Table 3

*Distribution of Sample by Gender*

<table>
<thead>
<tr>
<th>Gender (n=2008)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1,014</td>
<td>50.50</td>
</tr>
<tr>
<td>Female</td>
<td>990</td>
<td>49.30</td>
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<tr>
<td>Total</td>
<td>2,004</td>
<td>99.80</td>
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</table>

Table 4

*Distribution of Sample by Age*

<table>
<thead>
<tr>
<th>Age</th>
<th>N</th>
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<td>16</td>
<td>41</td>
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<td>17</td>
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<td>18</td>
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<td>20</td>
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<td>21 and older</td>
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<tr>
<td>Total</td>
<td>2,001</td>
<td>99.64</td>
</tr>
</tbody>
</table>

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Tables 5 provides information on the breakdown of sample by hometown. It is quite evident that the sample in this study is representative of all geographical regions of the island. Data concerning the ethnic makeup of each student are provided in Table 6. The subjects in this study represent 13 ethnic classifications. Most (73.5%) of the subjects are Puerto Ricans. Eighty-four (4.2%) considered themselves as Americans, while 406 (20.2%) indicated themselves to be American Puerto Ricans. The rest represented a variety of ethnic backgrounds.

Table 7 represents data concerning family income. Approximately 19% of the students came from families whose income is $10,000 or less. Slightly over a third of the subjects came from families with income of over $30,000 per year.

The types of elementary and secondary schools the subjects attended prior to attending the university can be found in Table 8. Almost half (47.0%) of the students came from public schools, while one-third (32.9%) came from private schools. About (19%) indicated they had attended both private and public schools.
Table 5

*Distribution by Sample Home Town*

<table>
<thead>
<tr>
<th>Town</th>
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</thead>
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<td>.6</td>
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Table 5  Continued

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<td>Patillas</td>
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</tr>
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<td>.3</td>
</tr>
<tr>
<td>Sabana Grande</td>
<td>41</td>
<td>2.0</td>
</tr>
<tr>
<td>Salinas</td>
<td>8</td>
<td>.4</td>
</tr>
<tr>
<td>San Germán</td>
<td>57</td>
<td>2.8</td>
</tr>
<tr>
<td>San Juan</td>
<td>65</td>
<td>3.2</td>
</tr>
<tr>
<td>San Lorenzo</td>
<td>8</td>
<td>.4</td>
</tr>
<tr>
<td>San Sebastián</td>
<td>57</td>
<td>2.8</td>
</tr>
<tr>
<td>Santa Isabel</td>
<td>7</td>
<td>.3</td>
</tr>
<tr>
<td>Toa Alta</td>
<td>13</td>
<td>.6</td>
</tr>
<tr>
<td>Toa Baja</td>
<td>17</td>
<td>.8</td>
</tr>
<tr>
<td>Trujillo Alto</td>
<td>12</td>
<td>.6</td>
</tr>
<tr>
<td>Vega Alta</td>
<td>8</td>
<td>.4</td>
</tr>
<tr>
<td>Vega Baja</td>
<td>16</td>
<td>.8</td>
</tr>
<tr>
<td>Vieques</td>
<td>1</td>
<td>.0</td>
</tr>
<tr>
<td>Villalba</td>
<td>9</td>
<td>.4</td>
</tr>
<tr>
<td>Yabucoa</td>
<td>12</td>
<td>.6</td>
</tr>
<tr>
<td>Yauco</td>
<td>47</td>
<td>2.3</td>
</tr>
<tr>
<td>USA</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>1,995</td>
<td>99.4</td>
</tr>
</tbody>
</table>
Table 6

*Distribution of Description of Sample by Ethnic Group*

<table>
<thead>
<tr>
<th>Ethnic Group (n=2,008)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>84</td>
<td>4.2</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>1475</td>
<td>73.5</td>
</tr>
<tr>
<td>American Puerto Rican</td>
<td>406</td>
<td>20.2</td>
</tr>
<tr>
<td>Dominican</td>
<td>5</td>
<td>.2</td>
</tr>
<tr>
<td>Dominican American</td>
<td>1</td>
<td>.0</td>
</tr>
<tr>
<td>Caribbean</td>
<td>2</td>
<td>.1</td>
</tr>
<tr>
<td>Central American</td>
<td>4</td>
<td>.2</td>
</tr>
<tr>
<td>South American</td>
<td>4</td>
<td>.2</td>
</tr>
<tr>
<td>European</td>
<td>3</td>
<td>.1</td>
</tr>
<tr>
<td>Afro-American</td>
<td>1</td>
<td>.0</td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
<td>.0</td>
</tr>
<tr>
<td>Oriental</td>
<td>1</td>
<td>.0</td>
</tr>
<tr>
<td>Mexican</td>
<td>2</td>
<td>.1</td>
</tr>
<tr>
<td>Total</td>
<td>1,997</td>
<td>99.5</td>
</tr>
</tbody>
</table>

Similar to Integrativeness Index, students' evaluations of their Attitude Toward the Learning Situation Index are neutral to little agreement, suggesting that student attitudes toward English teachers and classes are somewhat the same. The motivation for learning English as a second-language appears to be quite moderate. There is a relationship between Evaluations of English Teachers and Evaluations of English Classes. Students who evaluated their ESL teachers in the past as unfavorable also tend to evaluate their ESL classes in the past also as unfavorable.
Table 7

Distribution of Sample’s Family Income

<table>
<thead>
<tr>
<th>Income</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5,000</td>
<td>148</td>
<td>7.37</td>
</tr>
<tr>
<td>5,001 - 10,000</td>
<td>236</td>
<td>11.75</td>
</tr>
<tr>
<td>20,001 - 30,000</td>
<td>363</td>
<td>18.07</td>
</tr>
<tr>
<td>30,001 - 40,000</td>
<td>222</td>
<td>11.05</td>
</tr>
<tr>
<td>40,001 - 50,000</td>
<td>168</td>
<td>8.37</td>
</tr>
<tr>
<td>50,000 or more</td>
<td>307</td>
<td>15.29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,902</td>
<td><strong>94.72</strong></td>
</tr>
</tbody>
</table>

Presentation of Analysis for Research Questions

Question 1 asked: Is there a linear relationship between Attitude Toward the Learning Situation Index, the Integrativeness Index, and the Motivation Index?

The means and standard deviations for Attitude Toward the Learning Situation Index, the Integrativeness Index, and the Motivation Index are presented in Table 9. Given the scales used (see Appendix A), the table shows that the scale score for the Integrativeness Index indicates that the students had neutral to little agreement in their evaluations of affective reactions towards Americans and their desire to learn English in order to integrate with the targeted language culture.
Table 8

**Distribution of Sample by School Attended for 12 Years**

<table>
<thead>
<tr>
<th>School</th>
<th>N'</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>661</td>
<td>32.9</td>
</tr>
<tr>
<td>Public</td>
<td>943</td>
<td>47.0</td>
</tr>
<tr>
<td>Both</td>
<td>380</td>
<td>18.9</td>
</tr>
<tr>
<td>Total</td>
<td>1,984</td>
<td>98.8</td>
</tr>
</tbody>
</table>

Table 10 shows the intercorrelations between Integrativeness Index, Attitude Toward the Learning Situation Index, and the Motivation Index. A Pearson correlation coefficient was calculated for the relationships between the indexes. These are small to moderate correlation coefficients. Each coefficient is significant at the 0.01 level. This indicated a significant linear relationship between the three variables was found. The correlation between integrativeness and motivation is especially noteworthy (r=0.552). Integrative students tend to be more motivated to learn the second language.

In order to examine whether there is a linear relationship among the three variables, direct method regression analysis was performed. The result of the regression analysis is found in Table 11.
Table 9

*Mean and Standard Deviations for The Integrativeness Index, Attitude Toward The Learning Situation Index, and The Motivation Index Scales (N = 1461): Hypothesis 1*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Possible Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrativeness Index</td>
<td>172.57</td>
<td>26.05</td>
<td>34 - 238</td>
</tr>
<tr>
<td>Attitude Toward the Learning Situation Index</td>
<td>227.47</td>
<td>47.30</td>
<td>50 - 380</td>
</tr>
<tr>
<td>Motivation Index</td>
<td>102.52</td>
<td>13.53</td>
<td>30 - 130</td>
</tr>
</tbody>
</table>

Table 10

*Intercorrelations between Scales for Attitudes Toward The Integrativeness Index, Attitude Toward The Learning Situation Index, and The Motivation Index (N = 1461): Hypothesis 1*

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude Toward The Integrativeness Index</td>
<td>--</td>
<td>.237*</td>
<td>.555*</td>
</tr>
<tr>
<td>Attitude Toward the Learning Situation Index</td>
<td>--</td>
<td>--</td>
<td>.342*</td>
</tr>
<tr>
<td>The Motivation Index</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

*p<0.001.
Table 11

Regression Model Results: The Integrativeness Index, Attitude Toward the Learning Situation Index, and the Motivation Index Scales (N = 1458): Hypothesis 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>T</th>
<th>Probability (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Integrativeness Index</td>
<td>0.262</td>
<td>0.011</td>
<td>0.502</td>
<td>23.21</td>
<td>0.000</td>
</tr>
<tr>
<td>Attitude Toward the Learning Situation Index</td>
<td>0.064</td>
<td>0.006</td>
<td>0.22</td>
<td>10.28</td>
<td>0.000</td>
</tr>
<tr>
<td>Constant</td>
<td>42.796</td>
<td>2.137</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. $R^2 = 0.355$, $F_{(2, 1456)} = 401.18$ ($p < .001$).

Both Attitude Toward the Learning Situation Index and Integrativeness Index are significant predictors of Motivation Index. The model accounts for approximately 36% of the variance in motivation. The model is significant at the 0.01 level. With a beta weight of 0.502, Integrativeness is the more 'important' predictor of motivation. It appears then that higher levels of motivation accompany higher scores in Attitude Toward the Learning Situation Index and the Integrativeness Index.

Question 2 asked: Is there a correlation between the Motivation Index, Parental Encouragement, English Class Anxiety, and English Use Anxiety?

Table 12 presents the means and standard deviations for the Motivation Index, Parental Encouragement, English Class Anxiety, and English Use Anxiety. Given the scales (see Appendix A), the scale scores for Parental Encouragement indicate that students had little to moderate agreement in their evaluations of parental support and
encouragement in the learning of English as a second language. Similar to Parental Encouragement, students' Evaluation of English Class Anxiety is little to moderate agreement. Students appear to perceive Parental Encouragement and English Class Anxiety and to perceive quite positive. Their evaluations of English Class Anxiety and English Use Anxiety indicate evidence of little discomfort or communication apprehension in the usage of the second language in or outside the classroom. As indicated earlier, the motivation to learn English as a second language is quite moderate.

Table 12

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean</th>
<th>SD</th>
<th>Possible Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Encouragement</td>
<td>48.21</td>
<td>13.87</td>
<td>10 - 70</td>
</tr>
<tr>
<td>English Class Anxiety</td>
<td>21.99</td>
<td>9.98</td>
<td>5 - 35</td>
</tr>
<tr>
<td>English Use Anxiety</td>
<td>9.87</td>
<td>3.00</td>
<td>5 - 35</td>
</tr>
<tr>
<td>The Motivation Index</td>
<td>102.37</td>
<td>13.47</td>
<td>30 - 130</td>
</tr>
</tbody>
</table>

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Table 13 shows the intercorrelations among Parental Encouragement, English Class Anxiety, English Use Anxiety, and Motivation Index. A Pearson correlation coefficient was calculated for the relationships between the scales and subscales mentioned. The correlations between Motivation Index and the other variables (Parental Encouragement, English Class Anxiety, and English Use Anxiety) are low but statistically significant at the 0.01 level. The relationship between the linear combination of Parental Encouragement, English Class Anxiety, English Use Anxiety, and the Motivation Index is examined through the use of direct method regression analysis that permitted the prediction of subjects' motivation based on the subscales mentioned (Elazar & Pedhazur, 1997). The result is shown in Table 14.

Table 13

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Class Anxiety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Use Anxiety</td>
<td>.841*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental Encouragement</td>
<td>-.066*</td>
<td>-.072*</td>
<td></td>
</tr>
<tr>
<td>The Motivation Index</td>
<td>.255*</td>
<td>.261**</td>
<td>.355*</td>
</tr>
</tbody>
</table>

*p<0.001.
Table 14

Regression Model Results: Parental Encouragement, English Class Anxiety, English Use Anxiety, and The Motivation Index (N = 1888); Hypothesis 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE$</th>
<th>$\beta$</th>
<th>$T$</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Encouragement</td>
<td>.368</td>
<td>.020</td>
<td>.375</td>
<td>18.315</td>
<td>.000</td>
</tr>
<tr>
<td>English Class Anxiety</td>
<td>.172</td>
<td>.052</td>
<td>.125</td>
<td>3.324</td>
<td>.001</td>
</tr>
<tr>
<td>English Use Anxiety</td>
<td>.246</td>
<td>.051</td>
<td>.182</td>
<td>4.824</td>
<td>.001</td>
</tr>
<tr>
<td>Constant</td>
<td>75.754</td>
<td>1.217</td>
<td>62.238</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

Note. $R^2 = .212, F_{(3, 1888)} = 169.34 (p<001)$.

As a set, Parental Encouragement, English Class Anxiety, and English use Anxiety are significant predictors of Motivation Index ($F_{(3, 1888)} = 169.34, p<001$) accounting for 20% of the variance. With a beta weight of 0.375, Parental Encouragement appears to be the more 'important' predictor of motivation. Higher levels of motivation tend to be accompanied by higher levels of parental support and anxiety levels, particularly in the class.

Question 3 asked: Is there a correlation between the Learning Situation Index and the Integrativeness Index?

Canonical correlation analysis (Elazar & Pedhazur, 1997) was performed between a set of attitudinal variables of the Integrativeness Index and a set of attitudinal variables toward the learning context. The results of this analysis are found in Tables 15 and 16. The first canonical correlation is 0.25 (6.3% overlapping variance) while the second

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canonical correlation is 0.096 (0.9% overlapping variance). Because there is negligible overlapping variance in the second canonical function, for the purpose of this study, only the first canonical function is interpreted.

Variables in the first set that are correlated with the first canonical variate are Attitude toward Americans (0.85), Attitude toward foreign people (0.76), Interest in foreign languages (0.44), and Integrative orientation (0.73). The variables in the second set that are correlated with the first canonical variate are Evaluation of teachers (0.95) and Evaluations of class (0.94). The first pair of canonical variates indicates that those with positive Attitude toward American and Attitude toward foreign people have higher levels of interest in foreign languages. Integrative Orientation Index subscales tend to have more positive attitudes toward evaluations of English classes and teachers.

Table 15

Statistics for First Canonical Discriminant Function for Hypothesis 3

<table>
<thead>
<tr>
<th>Function</th>
<th>Eigen values</th>
<th>Canonical Correlation</th>
<th>df</th>
<th>Chi Square</th>
<th>Tail Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.06350</td>
<td>0.25199</td>
<td>8</td>
<td>112.19</td>
<td>.001</td>
</tr>
<tr>
<td>2</td>
<td>0.00912</td>
<td>0.096</td>
<td>3</td>
<td>13.75</td>
<td>.0033</td>
</tr>
</tbody>
</table>
Table 16

Correlations, Standardized Canonical Coefficients, Canonical Correlations, Percentage of Variance and Redundancy between Attitudes Toward Americans, Attitudes Toward Foreign People, Interest in Foreign Languages, Integrative Orientation, Evaluation of English Teachers, Evaluation of English Classes, and Their Corresponding Canonical Variates: Hypothesis 3

<table>
<thead>
<tr>
<th>Variables</th>
<th>First Canonical Variate</th>
<th>Second Canonical Variate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correlation</td>
<td>Coefficient</td>
</tr>
<tr>
<td><strong>Set 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude Toward Americans</td>
<td>0.853</td>
<td>0.525</td>
</tr>
<tr>
<td>Attitude Toward Foreign People</td>
<td>0.756</td>
<td>0.428</td>
</tr>
<tr>
<td>Interest in Foreign Languages</td>
<td>0.438</td>
<td>-0.066</td>
</tr>
<tr>
<td>Integrative Orientation</td>
<td>0.733</td>
<td>0.350</td>
</tr>
<tr>
<td>Percentage of Variance</td>
<td>0.88</td>
<td>0.11</td>
</tr>
<tr>
<td>Redundancy</td>
<td>0.056</td>
<td>0.001</td>
</tr>
<tr>
<td><strong>Set 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation of English Teachers</td>
<td>0.948</td>
<td>0.559</td>
</tr>
<tr>
<td>Evaluation of English Class</td>
<td>0.935</td>
<td>0.503</td>
</tr>
<tr>
<td>Percentage of Variance</td>
<td>0.50</td>
<td>0.016</td>
</tr>
<tr>
<td>Redundancy</td>
<td>0.032</td>
<td>0.001</td>
</tr>
<tr>
<td>Canonical Correlation</td>
<td>0.252</td>
<td>0.096</td>
</tr>
</tbody>
</table>

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Question 4 asked: Is there a correlation between the Integrativeness Index, the Learning Situation Index, the Motivation Index, and CEEB Scores?

Table 17 shows the means and standard deviations for the Integrativeness Index, Attitude Toward the Learning Situation Index, the Motivation Index, and CEEB Scores. Given the scales used (see Appendix A), the scale score for the Integrativeness Index indicates that the students had neutral to little agreement in their evaluations of affective reactions towards Americans and their desire to learn English for integrative reasons with the targeted language culture. Interest in Foreign Languages suggests a more moderate agreement in having interest in studying foreign languages. The Motivation Index for learning English as a second-language appears to be quite moderate.

The intercorrelation among CEEB Scores, Integrativeness Index, Attitude Toward the Learning Situation Index, and Motivation Index is found in Table 18. A Pearson correlation coefficient was calculated for the relationships between these indexes. The correlations between CEEB Scores and the other variables are very low, particularly with integrativeness. These, however, are statistically significant at the 0.05 level indicating a linear relationship between the four variables.
Table 17

Mean and Standard Deviations for CEEB Scores, The Motivation Index, Attitude Toward Learning Situation Index, and The Integrativeness Index (N=1455): Hypothesis 4

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean</th>
<th>SD</th>
<th>Possible Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEEB scores</td>
<td>563.63</td>
<td>116.35</td>
<td>200 - 800</td>
</tr>
<tr>
<td>The Motivation Index</td>
<td>102.52</td>
<td>13.59</td>
<td>30-130</td>
</tr>
<tr>
<td>Attitude Toward Learning Situation Index</td>
<td>227.52</td>
<td>47.28</td>
<td>50-350</td>
</tr>
<tr>
<td>The Integrativeness Index</td>
<td>172.58</td>
<td>26.09</td>
<td>34-238</td>
</tr>
</tbody>
</table>

Table 18

Intercorrelations between The Integrativeness Index, Attitude Toward the Learning Situation Index, The Motivation Index, and CEEB Scores (N=145): Hypothesis 4

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Integrativeness Index</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude Toward the Learning Situation Index</td>
<td>0.237**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Motivation Index</td>
<td>0.556**</td>
<td>0.342**</td>
<td></td>
</tr>
<tr>
<td>CEEB Scores</td>
<td>-0.047*</td>
<td>0.165**</td>
<td>0.152**</td>
</tr>
</tbody>
</table>

*p<0.05. **p<0.001.
Direct method regression analysis (Elazar & Pedhasur, 1997) was conducted to examine if the linear combination of the Integrativeness Index, the Motivation Index and Attitude Toward the Learning Situation Index were related to CEEB. The result of this analysis is found in Table 19.

Table 19

Summary of Regression Analysis for Variables: The Motivation Index, Attitude Toward the Learning Situation Index, The Integrativeness Index, and CEEB Scores (N = 145): Hypothesis 4

<table>
<thead>
<tr>
<th>Variables</th>
<th>$B$</th>
<th>$SE$</th>
<th>$\beta$</th>
<th>$T$</th>
<th>Probability $(p)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Motivation Index</td>
<td>1.841</td>
<td>.271</td>
<td>.215</td>
<td>6.8</td>
<td>.000</td>
</tr>
<tr>
<td>Attitude toward the Learning Situation Index</td>
<td>.343</td>
<td>.067</td>
<td>.139</td>
<td>5.14</td>
<td>.000</td>
</tr>
<tr>
<td>The Integrativeness Index</td>
<td>-.889</td>
<td>.136</td>
<td>-.199</td>
<td>-6.51</td>
<td>.000</td>
</tr>
<tr>
<td>Constant</td>
<td>450.41</td>
<td>24.92</td>
<td></td>
<td></td>
<td>.000</td>
</tr>
</tbody>
</table>

Note: $R^2 = .065 F_{(3, 1451)} = 33.63 \ (p < .001)$.

As a set, The Motivation Index, Attitude Toward the Learning Situation, and the Integrativeness Index are significant predictors of CEEB Scores. The regression model accounts for only $6.5\%$ of the variance in CEEB Scores. With beta weight at $0.215$, motivation appears to be the best predictor of CEEB Scores, followed by the Integrativeness Index and Attitude Toward the Learning Situation Index. Higher CEEB Scores appear to be related to higher motivation levels, more positive attitude toward the learning situation, but lower levels of integrativeness.
Question 5 asked: Is there a correlation between measures of Attitude Toward Americans, Attitude Toward Foreign People, Attitude Toward Foreign Languages, Integrative Orientation, Evaluations of English Teachers, Evaluations of English Classes, Desire to Learn English, Motivational Intensity, and Attitude Toward Learning English?

Canonical correlation analysis (Elazar & Pedhazur, 1997) was performed between the two sets of attitudinal and motivational variables. The attitudinal variables (Set 1) are Attitude Toward Americans, Attitude Toward Foreign Languages, Integrative Orientation, Evaluations of English Teachers, and Evaluations of English Classes. The motivational variables (Set 2) consist of Desire to Learn English, Motivational Intensity, and Attitudes Toward Learning English.

The results of the canonical correlation analysis are found on Tables 20 and 21. Two canonical functions are significant at the 0.05 level. The first canonical correlation is 0.65 (42% overlapping variance) while the second canonical correlation is 0.13 (1.6% overlapping variance). Attitudinal variables that are correlated with the first canonical variate are Attitudes toward American (0.62), Attitude toward foreign languages (0.49), interest in foreign languages (0.77), integrative orientation (0.75), Evaluations of Teachers (0.43), and Evaluations of Classes and (0.55). Motivational variables that correlated with the first canonical variate are Desire to learn English (0.82), Motivational intensity (0.67), and Attitude toward learning English (0.95). The first canonical function indicates that those who have positive attitudes toward Americans and foreign people, higher levels of interest in foreign languages, integrative orientation, and positive attitudes toward teachers and classes tend to have higher motivational intensity, greater desire to learn English, and a more positive attitude toward learning English. The
second canonical function has only 1.6% overlapping variance. For the purpose of this study, this function will not be considered since the common variance is so small.

Table 20

Statistics for First Canonical Discriminant Function for Hypothesis 5

<table>
<thead>
<tr>
<th>Function</th>
<th>Eigen Values</th>
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<th>df</th>
<th>Chi Square</th>
<th>Tail Prob.</th>
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<td>0.079</td>
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Question 6 asked: Is there a correlation between English Class Anxiety, English Use Anxiety, Parental Encouragement, Instrumental Orientation, and Desire to Learn English, Motivational Intensity, Attitude Toward Learning English?

Canonical correlation analysis was performed between a set (Set 1) of variables consisting of English Class Anxiety and English Use Anxiety, Parental Encouragement and Instrumental Orientation and a set (Set 2) of motivational variables (Desire to Learn English, Motivational Intensity, and Attitude Toward Learning English). The results of this analysis are found on Tables 22 and 23. Three canonical functions are significant at the 0.05 level. The first canonical correlation is 0.53 (28.5% overlapping variance) while the second canonical correlation is 0.21 (4.6% overlapping variance). The third canonical correlation is 0.07 (0.5% overlapping variance). For the purpose of this study, only the first two canonical functions will be considered since the
Table 21

Standardized Canonical Coefficients, Canonical Correlations, Percentage of Variance and Redundancy Between Attitude Toward Americans: Attitude Toward Foreign People, Interest in Foreign Languages, Integrative Orientation, Evaluations of English Teachers, Evaluations of English Classes, Desire to Learn English Motivational Intensity Attitudes Toward Learning English, and their corresponding Canonical Variates: Hypothesis 5

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<td>0.041</td>
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</tbody>
</table>

| Set 2                                          |             |             |             |             |             |             |             |             |             |             |             |             |          |
| Desire to Learn English                        | 0.820       | 0.335       | 0.393        | -0.338       | 0.570       | 1.295       |             |             |             |             |             |             |          |
| Motivational Intensity                         | 0.674       | 0.133       | 0.739        | 1.240        | 0.019       | -0.274      |             |             |             |             |             |             |          |
| Attitudes Toward Learning English              | 0.944       | 0.674       | -0.164       | -0.591       | -0.287      | -0.930      |             |             |             |             |             |             |          |
| Percentage of Variance                         | .38         | 21.0        |              |             |             |             |             |             |             |             |             |             |          |
| Redundancy                                     | 16.0        | 003.0       |              |             |             |             |             |             |             |             |             |             |          |
| Canonical Correlation                          | 42.0        |             |              |             |             |             |             |             |             |             |             |             |          |
third function has very little common variance.

In Set 1 the variables that correlated with the first canonical variate are Parental Encouragement (0.66), Instrumental Orientation (0.64), English Class Anxiety (0.52), English Class Anxiety (0.53). Motivational variables associated with the first canonical variate are desire to learn English (.082), Motivational Intensity (0.79), and Attitude Toward Learning English (0.89). The first pair of canonical variates indicates that higher levels of Parental Encouragement, Instrumental Orientation, and English Class and Use Anxiety tend to be accompanied by a more positive Attitude Toward Learning English, higher levels of Motivational Intensity, and greater Desire to Learn English.

The variables from Set 1 that are correlated with the second canonical variate (using a cutoff point of 0.3) are Instrumental Orientation (0.72), English class anxiety (-0.61), and English use anxiety (-0.39). Motivational variables that correlated with the second canonical variate are Motivational Intensity (-0.56) and Attitude Toward Learning English (0.43). This second pair of canonical variates indicates that higher levels of Instrumental Orientation but lower levels of English Class and Use Anxiety less apprehension or fear in using the English language are associated with lower levels of Motivational Intensity but more positive attitudes toward learning of English as a second-language.
Table 22

Statistics for First Canonical Discriminant Function for Hypothesis

<table>
<thead>
<tr>
<th>Function</th>
<th>Eigen Values</th>
<th>Canonical Correlation</th>
<th>df</th>
<th>Chi Square</th>
<th>Tail Prob.</th>
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</table>

Question 7 asked: Is there a linear correlation between CEEB Scores and the following subscales?

- a. Attitude Toward Foreign People
- b. Interest in Foreign Languages
- c. Integrative Orientation
- d. Instrumental Orientation
- e. Attitude Toward Americans
- f. Evaluation of English Teachers
- g. Evaluation of English Classes
- h. Motivational Intensity
- i. Desire to Learn English
- j. Attitude Toward Learning English
- k. English Class Anxiety
- l. English Use Anxiety
- m. Parental Encouragement.
Table 23

Correlations, Standardized Canonical Coefficients, Canonical Correlations, Percentage of Variance and Redundancy between Parental Encouragement, Instrumental Orientation, English Class Anxiety, English Use Anxiety, Desire to Learn English, Motivational Intensity, Attitudes Toward Learning English and their Corresponding Canonical Variates: Hypothesis 6

<table>
<thead>
<tr>
<th>Set 1</th>
<th>First Canonical Variate</th>
<th>Second Canonical Variate</th>
<th>Third Canonical Variate</th>
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<td>Correlation</td>
</tr>
<tr>
<td>Parental Encouragement</td>
<td>0.661</td>
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<tr>
<td>Instrumental Orientation</td>
<td>0.642</td>
<td>0.486</td>
<td>0.720</td>
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<tr>
<td>English Class Anxiety</td>
<td>0.522</td>
<td>0.336</td>
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<td>English Use Anxiety</td>
<td>0.526</td>
<td>0.288</td>
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<td>Percentage of Variance</td>
<td>69</td>
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<td>00</td>
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<table>
<thead>
<tr>
<th>Set 2</th>
<th>Desire to Learn English</th>
<th>Motivational Intensity</th>
<th>Attitudes Toward Learning English</th>
<th>Percentage of Variance</th>
<th>Redundancy</th>
<th>Canonical Correlation</th>
</tr>
</thead>
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<td>Coefficient</td>
<td>Correlation</td>
<td>Coefficient</td>
<td>Correlation</td>
<td>Coefficient</td>
</tr>
<tr>
<td>Desire to Learn English</td>
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<td>0.295</td>
<td>-0.139</td>
<td>-0.161</td>
<td>0.560</td>
<td>1.314</td>
</tr>
<tr>
<td>Motivational Intensity</td>
<td>0.791</td>
<td>0.347</td>
<td>-0.561</td>
<td>-0.986</td>
<td>-0.246</td>
<td>-0.746</td>
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<tr>
<td>Attitudes Toward Learning English</td>
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</table>
Table 24 presents the means and standard deviations for the following variables: Evaluations of English Teachers, Evaluations of English Classes, Instrumental Orientation, Integrative Orientation, Attitude Toward Americans, Interest in Foreign Languages, Attitude Toward Learning English, Attitude Toward Foreign People, Attitude Toward Foreign Languages, English Class Anxiety, English Use Anxiety, Motivational Intensity, Desire to Learn English, and CEEB Scores. Given the scales used (see Appendix A), the subjects appear to have low to moderate levels of motivation, anxiety, and attitudes toward the learning situation.

Table 25 presents the intercorrelation matrix for the subscales in the A/MTB translated version and the CEEB Scores. It is quite obvious from the table that CEEB presents very little correlation with motivational and attitudinal variables. CEEB Scores does, however, have a moderate correlation with English Use Anxiety (0.45) and English Class Anxiety (0.38). To examine if CEEB Scores were related to the linear combination of motivational, attitudinal, and anxiety variables mentioned above, direct method regression analysis (Elazar & Pedhasur, 1997) was conducted. The result of this analysis is found in Table 26.
Table 24

Means and Standard Deviations for the subscales: Evaluation of English Teachers, Evaluation of English Classes, Attitude Toward Learning English, Attitude Toward Foreign People, Interest in Foreign Languages, Integrative Orientation, Desire to Learn English, Motivational Intensity, English Class Anxiety, English Use Anxiety, Parental Encouragement and Instrumental Orientation (N = 1473): Hypothesis 7

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<th>Possible</th>
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<td>25-175</td>
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<td>110.23</td>
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<td>25-175</td>
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<td>.331</td>
<td>.380</td>
<td>.008</td>
<td>.317</td>
<td>.357</td>
<td>.332</td>
<td>.289</td>
<td>.289</td>
<td>.072</td>
<td>.79</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEEB Scores</td>
<td>128</td>
<td>.184</td>
<td>.127</td>
<td>-0.51</td>
<td>.042</td>
<td>.008</td>
<td>-0.34</td>
<td>.028</td>
<td>.189</td>
<td>.088</td>
<td>.376</td>
<td>.453</td>
<td>-113</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
Table 26

**Summary of Regression Analysis for the Variables: Evaluation of English Teachers, Evaluation of English Classes, Attitude Toward Learning English, Attitude Toward Americans, Attitude Toward Foreign People, Interest in Foreign Languages, Integrative Orientation, Instrumental Orientation, Desire to Learn English, Motivational Intensity, English Class Anxiety, English Use Anxiety, Parental Encouragement, and CEEB Scores (N = 1459): Hypothesis**

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>T</th>
<th>Probability (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluations of English Teachers</td>
<td>2.976</td>
<td>.163</td>
<td>.007</td>
<td>1.83</td>
<td>.855</td>
</tr>
<tr>
<td>Evaluations of English Class</td>
<td>.458</td>
<td>.178</td>
<td>.096</td>
<td>2.567</td>
<td>.010</td>
</tr>
<tr>
<td>Attitude Toward Learning English</td>
<td>-.231</td>
<td>.416</td>
<td>.018</td>
<td>.555</td>
<td>.579</td>
</tr>
<tr>
<td>Attitude Toward Americans</td>
<td>-.466</td>
<td>.270</td>
<td>-.049</td>
<td>-.728</td>
<td>.084</td>
</tr>
<tr>
<td>Attitude Toward Foreign People</td>
<td>-.315</td>
<td>.324</td>
<td>-.026</td>
<td>-.970</td>
<td>.332</td>
</tr>
<tr>
<td>Interest in Foreign Languages</td>
<td>-.256</td>
<td>.393</td>
<td>-.019</td>
<td>-.651</td>
<td>.515</td>
</tr>
<tr>
<td>Integrative Orientation</td>
<td>-1.453</td>
<td>.876</td>
<td>-.052</td>
<td>-1.659</td>
<td>.097</td>
</tr>
<tr>
<td>Instrumental Orientation</td>
<td>2.8839</td>
<td>.919</td>
<td>.087</td>
<td>3.089</td>
<td>.002</td>
</tr>
<tr>
<td>Desire to Learn English</td>
<td>5.437</td>
<td>1.209</td>
<td>.147</td>
<td>4.499</td>
<td>.000</td>
</tr>
<tr>
<td>Motivational Intensity</td>
<td>-2.981</td>
<td>1.043</td>
<td>-.086</td>
<td>-2.857</td>
<td>.004</td>
</tr>
<tr>
<td>English Class Anxiety</td>
<td>-8.57</td>
<td>.499</td>
<td>-.007</td>
<td>-1.72</td>
<td>.864</td>
</tr>
<tr>
<td>English Use Anxiety</td>
<td>4.681</td>
<td>.493</td>
<td>.404</td>
<td>9.495</td>
<td>.000</td>
</tr>
<tr>
<td>Parental Encouragement</td>
<td>-.845</td>
<td>.226</td>
<td>-.099</td>
<td>-3.74</td>
<td>.000</td>
</tr>
<tr>
<td>Constant</td>
<td>396.721</td>
<td>27.104</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. R² = .212 F_{13, 1450} = 35.50 (p < .001).*

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As a set, these motivational, attitudinal, and anxiety variables are significant predictors of CEEB Scores, accounting for 21.2% of the variance in CEEB Scores. This is statistically significant at the 0.05 level. Six of the 13 variables are significant predictors. These are Attitude Toward English Classes, Instrumental Orientation, Desire to Learn English, Motivational Intensity, English Use Anxiety, and Parental Encouragement. Of the six significant predictors, English Use Anxiety is the strongest ($\beta=0.40$) followed by desire to learn English ($\beta=0.15$). The other four variables are weak predictors.

**Summary of Findings**

1. Integrativeness Index and Attitude Toward the Learning Situation Index are significant related to the Motivation Index. Higher levels of Integrativeness and more positive attitudes toward the learning situation are associated with higher levels of motivation.

2. Significant intercorrelations were found between Parental Encouragement, English Use Anxiety and English Class Anxiety and the Motivation Index. As a set, Parental Encouragement, English Class Anxiety, and English Use Anxiety is a significant predictor of the Motivation Index ($F_{13,3989} = 169.34, p<0.001$) accounting for 20% of the variance. With a beta weight of 0.375, Parental Encouragement was the more important predictor of the Motivation Index.

3. Significant correlations were found between The Integrativeness Index subscales and Attitudes Toward the Learning Situation Index subscales. Students with positive attitudes Toward Americans, and Attitude Toward Foreign People, a higher level
of Interest in Foreign Languages and Integrative Orientation tend to have positive Evaluations of English Classes and Teachers.

4. As a set, motivation subscales, Attitude Toward the Learning Situation Index and Integrativeness Index are significant predictors of CEEB Scores. They account for only 6.5% of the variance in CEEB Scores.

5. All canonical functions were significant. Students who have a positive Attitude toward Americans and foreign people, a higher level of interest in foreign languages, integrative orientation, a positive attitude toward teachers and classes tend to have higher motivational intensity, greater desire to learn English and more positive attitude toward learning English.

6. Canonical functions were significant. Students, who were evaluated as having higher levels of Parental Encouragement, Instrumental Orientation, English Class Anxiety and English Use Anxiety, tend to be accompanied by more positive attitude toward learning.

7. All subscales were related and significant. Attitudinal and motivational Attitudes correlated very little with CEEB. Students with high English use anxiety levels and greater desire to learn the second-language appear to be higher in their CEEB Scores.
CHAPTER V

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

This final chapter presents a summary of the study, discussion of the findings, and conclusions and recommendations made as a result of the findings. The summary of the study includes an overview of the problem, the literature review, the methodology used in the study, as well as a review of the significant findings. The conclusions are presented, and the recommendations section presents possibilities for further practice and research.

Summary

Purpose of the Study

This study was conducted to investigate whether attitudinal, motivational and anxiety factors are related to proficiency in English as a second language.

Sample

This investigation was done using first-year college students enrolled in the University of Puerto Rico, Mayagüez Campus, during the 2001-2002 school year. Presumably, all the students in the sample had been exposed to 12 years of ESL learning in public and private schools in Puerto Rico. Only those subjects who signed the consent forms were included in the study. These students came from various regions of the Island. All 2,500 students who were enrolled in various levels of ESL classes were
requested to participate. From a total of 2,500 only 2,008 answered the questionnaire “Espejo de Attitudes”, the translated adapted version of the AMTB (Attitude Motivation Test Battery; Gardner, 1985a). Most of the subjects were between 17 and 19 years old. There were a total of 990 (49%) females and 1,014 (51%) males in the sample.

Instrumentation

The students were requested to respond to a series of items assessing their Attitudes Toward the Learning Situation Index (ESL teachers and classes in the past), their motivational intensity to learn English while they were in school, their anxiety at the time, their recall of parental encouragement, their orientation towards learning English as a second language, and their feelings toward integrating into the targeted language culture.

The instrument used in this study, “Espejo de Actitudes” Attitude Motivation Test Battery (Gardner, 1985a), is a translated adapted version. The original Attitude Motivation Test Battery is a research instrument that was developed to assess the major affective components shown to be involved in second-language learning. To date, its major applications have involved investigations of (a) the correlations of subtests and composite test scores with indices of language achievement and behavioral intentions to continue language study, (b) the effects of specific programs, excursions, etc., on attitudinal motivational characteristics, and (c) the relation of attitudes and motivation to classroom behavior (Gardner, 1985a, 1995). It provides a reliable and valid index of the various attitudinal/motivational characteristics, which researchers may wish to investigate in many different contexts.
"Espejo de Actitudes" (A'MTB) is comprised of 19 scales assessing the individual's affective reactions toward various groups, individuals, and concepts associated with second-language acquisition in Puerto Rico. Scores on subtests represent attitudes inferred on the basis of individuals' opinions about specific items, and it is possible that students may give answers which they feel are desirable or "correct."

The variables tend to belong to one of four general categories: Evaluations of Attitudes Toward the Learning Situation Index, the Integrativeness Index, the Motivation Index, and the Anxiety Index. The category of Attitudes Toward the Learning Situation Index reflects the student's evaluation of formal ESL instruction in Puerto Rico and is assessed by two scales: Evaluations of English Teachers in the past and the Evaluation of English Classes in the past. Integrativeness refers to the student's willingness and interest in having social interaction with members of the second-language group who are North Americans. Four scales assess it: Attitude Toward Americans, Attitude Toward Foreign People, Interest in Foreign Languages, and an Integrative Orientation scale towards learning the language. The Motivation Index is conceptualized as a composite score of the individual's Desire to Learn English, Attitude Toward Learning the Language, and Motivational Intensity (the effort expended to learn the language). The Anxiety Index is a composite score of two subscales: English Class Anxiety and English Use Anxiety. These scales refer to the individual's apprehension in the language class or setting where they use the language. The Likert-type scale was used to measure Attitude Toward Americans, Attitude Toward Foreigners, Attitude Toward Learning English, Integrative and Instrumental Orientations, English Class Anxiety, and Parental Encouragement.

Multiple-choice items were used to measure levels of motivational intensity and desire to
learn English. Semantic deferential item scales were used to make evaluative judgments about early experiences in second-language learning that involved ESL teachers (elementary, intermediate, and high school).

The independent variables measured were the scales and subscales of the AMTB translated adapted version. The dependent variable was the students’ CEEB scores. Descriptive data on the subjects were obtained by performing frequency distribution of the students’ evaluations of the demographics part of the questionnaire. Statistical procedures using intercorrelations, multiple regression, and canonical correlations were used to test the research hypotheses. Statistical significance was set at alpha =0.05. The Statistical Packages for the Social Sciences (SPSS) 10.1 and BMDP Release 7.0 Statistical Software, Inc., 1993, were used for the data analysis.

**Findings and Discussions on Hypotheses**

As a result of review of literature, the following seven null hypotheses were developed as the framework for this research.

**Question 1:** Is there a linear correlation between Attitude Toward the Learning Situation Index, the Integrativeness Index, and the Motivation Index?

The first question sought to identify intercorrelations between scales: evaluations of the Learning Situation Index, the Integrativeness Index, and the Motivation Index (see Appendix F). Significant positive correlations were found indicating reliable relationships that ranged from low to moderate. In the question above I obtained a correlation of .24 between the Integrativeness Index and the Motivation Index, a .55 between Integrativeness Index and evaluations of the Learning Situation Index, and a .34
between evaluations of the Learning Situation Index. They were significant at the .05 level. To explore linear relationships among the variables, multiple regression analysis was used to explain the variations in the evaluations of the Learning Situation Index and the Integrativeness Index that identified the proportion of the variance in the Motivation Index. Both predictors accounted for a significant moderate variance in the Motivation Index (35%). As indicated by the beta weights, the relationships between the significant measures of Evaluations of the Learning Situation Index and the Integrativeness Index were in the directions of the research hypothesis and had been reported in previous research (Gardner, 1985a; Gardner et al., 1995). The Socio-Educational Model posits that Attitudes Toward the Learning Situation Index, the Integrativeness Index, and the Motivation Index are three correlated variables forming an "Integrative Motive" (Gardner, 1985a; Gardner et al., 1997). They argue that these same variables will support the individuals' motivation to learn the second language.

First-year college students' evaluations indicated that those who have favorable attitude toward integrativeness have evaluated their ESL teachers and classes favorably and will be motivated to learn the second language. The regression model suggested an existing integrative motive among attitudinal motivational attributes. There are no specific studies in Puerto Rico using these three predictors of motivation towards second-language learning and its relationship to achievement.

Question 2: Is there a linear correlation between measures of the Motivation Index, Parental Encouragement, English Class Anxiety, and English Use Anxiety? What attitudes revealed in the survey explain the variance in the Motivation Index?
This question sought to identify intercorrelations between scales for the Motivation Index, Parental Encouragement, English Class Anxiety, and English Use Anxiety. Significant low to moderate positive and negative correlations were found. In the question above I obtained a correlation of .35 between the Motivation Index and Parental Encouragement, a .25 between Evaluations English Classes, English Class Anxiety, and the Motivation Index, a .26 between English Use Anxiety and the Motivation Index, a -.05 between English Class Anxiety, English Use Anxiety, and Parental Encouragement. These were significant at the .05 level. Multiple regression analysis was used to explain the variations in Parental Encouragement, English Class Anxiety, and English Use Anxiety that identified the proportion of the variance in the Motivation Index. All three of the hypothesized predictors, Parental Encouragement, English Class Anxiety, and English Use Anxiety, accounted for 30% of the variance in motivation. As indicated by the beta weights, the relationships between these significant measures were not in agreement with the research hypothesis and had rarely been reported in previous research (Gardner, 1985a; Gardner et al., 1995, 1997).

Early research indicated that anxiety was negatively related to motivation (Gardner, 1985a; Gardner et al., 1997). Scovel (1978) reviewed a number of studies investigating relationships between anxiety levels and second-language achievement and found evidence for positive, negative, and no relationship. But, in recent years, there has been much more research interest in anxiety levels in the second-language classroom. Horwitz and Cope (1986) divided anxiety into various elements. Many scales have been developed to account for these relationships. This study used the “Anxiety Use Scale” by Clement, Gardner, and Smythe (1977).
I expected that in the second-language learning environment in Puerto Rico some levels of anxiety would be revealed because Scovel (1978) argues that anxiety levels are present in all second-language learning environments. In the ESL programs in the Puerto Rican school, students feel fear or apprehension in using the second language in the classroom. Gardner, et al. (1997) has argued that high levels of motivation will cause low levels of anxiety. Maclntyre and Gardner (1989) found that anxiety-provoking experiences might create difficulties in cognitive processing and in turn influence individual levels of achievement. Anxiety levels have been conceptualized as playing a role in the Socio-Educational Model. It predicts that motivation and anxiety will influence how successful one is at learning a second language (Gardner, 1985a; Gardner et al., 1997). High levels of motivation will cause low levels of anxiety (Maclntyre & Gardner, 1991).

This study found anxiety to be related positively to motivation. Students with high levels of anxiety will be motivated to learn the second language, supporting prior findings of Gardner, et al. (1991) and Horowitz, et al. (1986). High levels of anxiety are related to high levels of motivation to learn a second language but negatively related to achievement.

Parental Encouragement has been found to influence motivation (Colletta et al., 1983) to learn a second language. This study found that parental support correlated highly with motivation. Their research has reported a close relationship between parental support in the home and motivation to learn the language and language achievement. Parents can play an active or passive role in the language learning process. Parents in Puerto Rico tend to play both roles. Many Puerto Ricans have an identity crisis and are
very sensitive to cultural and political issues. This influences parents in favor of 
commonwealth, statehood, or independence. Parents in favor of statehood or 
commonwealth tend to influence their children to learn the second language; parents who 
are in favor for an independent status for the Island tend to influence them against 
statehood, and against integrativeness and second-language learning. Parents may also 
play a passive role by not supporting the second-language experiences of their children 
(Gardner, 1985a; Gardner et al., 1995) and in turn minimizing motivation because of 
their own limitations in English as second-language learning.

Question 3: Is there a correlation between the Learning Situation Index and the 
Integrativeness Index? What attitudes revealed in the survey from the subscales of the 
Integrativeness Index will explain the variance of the Learning Situation Index subscales?

This question sought to identify intercorrelations between subscales for scales of 
the Learning Situation Index and the Integrativeness Index. Significant positive 
correlations were found indicating reliable relationships but the correlations were low. In 
the question above I obtained a correlation of .19 between Attitude Toward Towards 
Americans and Evaluations of teachers, and .20 between Attitude Toward Towards 
Americans and Evaluations of English Classes, a .18 between Attitude Toward Foreign 
People and Evaluations of English Teachers, a .16 between Attitude Toward Foreign 
People and Evaluations of English Classes, .08 between Interest in Foreign Languages 
and Evaluations of English Teachers, a .10 between Interest in Foreign languages and 
Evaluations of English Classes, a .06 between the Integrativeness Index and Evaluations 
of English Teachers, and a .08 between the Integrativeness Index and Evaluations of 
English Classes. They were significant at the .05 level. Canonical analysis was used to
explain the variations in Teachers and Class (set 1) and Attitude Toward Americans. Interest in Foreign Languages, Attitude Toward Foreign People and Integrative orientation (set 2). The first canonical function accounted for only 6% of the variance. The correlations between Evaluations of English Teachers and Evaluations of English Classes and the first canonical variates were 0.93 and 0.85 respectively. Correlations between the first canonical variates and Attitude Toward Americans, Interest in Foreign Languages, and Attitude Toward Foreign People were 0.85, 0.76, and 0.43 respectively. The analysis showed that positive Attitude Toward Americans, Attitude Toward Foreign People, and high Interest in Foreign Languages tend to have positive Evaluations of English Teachers and also positive Evaluations of English Classes.

Students, who tend to have positive attitudes toward the ESL teachers and classes in the past developed a positive attitude towards integrativeness. Likewise students with high integrative attitudes tend to evaluate teachers and classes positively. Canonical correlations permitted the screening of the relationship between these two significant sets of variables. Findings in Tables 18 and 19 support previous findings that teachers and the class environment contribute to the favorable integrative attitudes of the students.

I found that the Department of Education, whose humanistic philosophy places importance on the affective dimension of learning, is reaching its goal.

Question 4: Is there a correlation between the Learning Situation Index, the Integrativeness Index, the Motivation Index and CEEB Scores? What attitudes revealed in the survey from the Learning Situation Index, the Integrativeness Index, and the Motivation Index, will explain the variance of CEEB Scores?
This question sought to identify intercorrelations between subscales for the Integrativeness Index, the Learning Situation Index, the Motivation Index and CEEB Scores. Significant positive correlations were found indicating reliable relationships ranging from low to moderate. In the question above I obtained a correlation of .009 between CEEB Scores and the Integrativeness Index, a .14 between CEEB Scores and the Motivation Index, a .34 between the Motivation Index and the Learning Situation Index, a .23 between the Learning Situation Index and the Integrativeness Index, and a .16 between the Learning Situation Index, and CEEB scores. These were significant at the .05 level. Multiple linear regression analysis was used to examine the linear relationship between the above mentioned attitudinal variables and CEEB scores. Variations in Attitude Toward the Learning Situation Index, the Integrativeness Index, and the Motivation Index provided the proportion of the variance in CEEB scores. All three predictors accounted for only 6% of the variance in CEEB scores. With a beta weight of 0.215, motivation index appears to be the best predictor of CEEB scores. Students with moderate motivation levels, moderate or favorable attitudes toward the learning environment, but lower levels of attitude toward integrating with the targeted culture seemed to explain variations in CEEB scores.

Result in Tables 20, 21 and 22 support previous findings of a relationship between attitudinal motivational attributes and achievement (Gardner, 1985a; Gardner et al., 1976, 1995, 1997). The correlations and regression analysis between the rating scales of the Learning Situation Index, the Integrativeness Index, and the Motivation Index represented only 6% of the variation in CEEB Scores. Even though the percentage of the variance was small there were significant relationships between the integrative motive
(correlation of the three scales), which (Gardner, 1985a) posits will influence CEEB  
Scores as achievement.

Results presented in Table 26 also support previous findings that there are various  
contributors to achievement (Dornyei, 1994). The Motivation Index contributed the  
largest percentage (.21).

There can be many reasons for this result. The National CEEB Test is measuring  
only specific limited skills in English as a second language. It is also a fixed-answer test.  
The students are assessed only in verbal comprehension and grammar. This is the only  
National Achievement Test used for placement of first-year college students in ESL  
levels. This standardized, commercially prepared test has been used in Puerto Rico for  
over 30 years. Most of the time, these tools assess broad and general terms. I consider it a  
trade-off in having used this test. It was carefully constructed, with established reliability,  
directions, and scoring procedures. But, on the other hand, the test may not have focused  
directly on the variables of interest to this study or the goals of the ESL curriculum in  
Puerto Rico.

The CEEB "ESLAT" is the only test students take once they finish their senior  
year at high school. They are all non-native speakers of English. It is the only measure  
used on the Island to place first-year college students in ESL courses. Native English  
speakers take the SAT. CEEB "ESLAT" indicates to the University Professors the ESL  
proficiency level acquired in the past 12 years. The ESLAT is tied to school subject  
measures. I did not find any literature in Puerto Rico on assessment on content validity  
of the CEEB. It might be that the new curriculum content may be different from the  
content assessed by the standardized test CEEB.
Question 5: Is there a linear correlation between measures of Attitude Toward Americans, Attitude Toward Foreign People, and Attitude Toward Foreign Languages, Integrative Orientation, Evaluations of English Teachers and Evaluations of English Classes, and Desire to Learn English, Motivational intensity, and Attitude Toward Learning English? What attitudes as revealed in the survey of the following subscales, Attitude Toward Americans, Attitude Toward Foreign People, and Attitude Toward Foreign Languages, Integrative Orientation, Evaluations of English Teachers, and Evaluations of English Classes, will explain the variance in the following subscales, Desire to Learn English, Motivational Intensity, and Attitude Toward Learning English?

In this study significant multivariate correlations were found among the many subscales of the composite indexes, the Motivation Index, the Integrativeness Index and the Learning Situation Index. From these indexes I used canonical correlations to investigate patterns between two selected sets of subscales. One set was considered the independent variables (subscales of the integrativeness Index and the Learning Situation Index) and the other set (subscales of the Motivation Index) the dependent variables. This constellation of variables provided three significant canonical functions. For the purposes of this study, only the first canonical function was interpreted as this accounted for the largest variance. Results indicated that students who evaluated favorable Attitude Toward Americans (.62), favorable Attitude Toward Foreign People (.49), Interest in Foreign Languages (.79), and tend to have a positive Integrative Orientation (.75), positive Evaluations of English Teachers (.43), positive Evaluation of English Classes (.55), tend also to exhibit Desire to Learn English as a second language (.82), are intensively motivated toward their goal in learning English (.68), and have positive
Attitude Toward Learning English (.94), as a second language. Accordingly, if students have a strong Desire to Learn English, Motivational Intensity, and positive Attitude Toward Learning English, they will show positive attitudes toward integrativeness and evaluate their teachers well. These results are presented in Tables 24 and 25. Collier (1998) in a study in Puerto Rico found significant differences between traditional methodology and new methodologies. She indicates that the students in Puerto Rico have the desire to learn English but the old traditional ways of teaching are frustrating their motivation and efforts. Albino (1998) argues for new approaches to be applied in the ESL teaching and learning environment in order to maintain high levels of motivation towards learning the second language. In fact many studies in Puerto Rico make clear recommendations for the use of new methods that address the affective dimension of learning in order to promote positive attitudes and motivation (Baez, 1993; Rivera, 1984).

Question 6: Is there a correlation between English Class Anxiety, English Use Anxiety, Parental Encouragement, Instrumental Orientation, and Desire to Learn English, Motivational Intensity, and Desire to Learn English? What attitudes revealed in the survey from the Anxiety Index, Parental Encouragement subscale, and Instrumental Orientation subscale and will explain the variance the subscales of the Motivation Index?

In this study, significant relationships were found among the many subscales of the composite indexes and subscales, Motivational Index, Anxiety Index, Instrumental Orientation, and Parental Encouragement. Canonical correlation analysis was performed to investigate patterns between these two selected sets. One set (Parental Encouragement, Instrumental Orientation, and the Anxiety Index) was considered the independent
variables and the other set (motivation index subscales) the dependent variables. This constellation of variables provided three significant canonical functions. Results presented in Tables 13 and 14 support previous findings that these variables are contributors to motivation (Gardner et al., 1997). Students who have high levels of English Use Anxiety (.66), and students that have high English Class Anxiety (.52), high Parental Encouragement (.66), and a high index of Instrumental Orientation (.64) will also have high levels of Desire to Learn English (.81), high Motivational Intensity (.79), and positive Attitudes towards learning English (.89). Accordingly, students who are highly motivated to learn the second language will have parents who support them, and will also have high anxiety levels.

The struggle of Puerto Ricans for identity and the political situation on the Island produce instability among many homes. Parents are not prepared to encourage or help their children with a language that is not their own. English is a language that they do not know or mastered while in school. On the 1999 Census, only 20% of the population in Puerto Rico reported they considered knowing some English and could understand English fairly well. On the other hand, many Puerto Ricans have lived in the USA for several years and have acquired skills in the second language, and they consider themselves bilingual. These parents have the capability of helping their children in the ESL learning process. The students who evaluated their parents as positive supporters of their English learning tend to have positive Instrumental Orientation, and moderate apprehension or fear to use the language in and outside the classroom. These students' evaluations indicate that they are positively motivated to learn the second language. It
proves that motivation in the Socio-Educational Model is the most important individual difference in influencing the other variables tested in the A/MTB.

Question 7: Is there a linear correlation between CEEB Scores and the following subscales?

a. Attitude Toward Foreign People
b. Interest in Foreign Languages
c. Integrative Orientation
d. Instrumental Orientation
e. Attitude Toward Americans
f. Evaluation of English Teachers
g. Evaluation of English Classes
h. Motivational Intensity
i. Desire to Learn English
j. Attitude Toward Learning English
k. English Class Anxiety
l. English Use Anxiety
m. Parental Encouragement.

What attitudes revealed in the survey from the above mentioned subscales explain the variance of CEEB Scores?

Results of intercorrelations between all the subscales and CEEB Scores were weak, moderate, and strong correlations (Table 28). The ratings of all the correlations of the subscales assessed by the A/MTB translated adapted version, support previous findings. (Gardner, 1985a; Gardner et al., 1997) argues that there is a relationship
between many of the measures of the A-MTB and achievement. The correlation between Attitudes Toward Learning English and Motivational Intensity (.48), Desire to Learn English (.58), Integrative Orientation (.49), and Interest in Foreign Languages (.49) was very strong. Positive attitudes towards foreign language also correlated highly with the two orientations to learning: Instrumental Orientation (.49) and Integrative orientation (.40). Attitudes Towards Americans (.19), Attitudes Toward Foreign Cultures (.08), Anxiety levels, Parental Encouragement, and Integrative and Instrumental Orientations correlated weakly with Evaluations of English Teachers and Evaluations of English Classes.

Favorable attitudes towards the targeted culture group are accompanied by positive Parental Encouragement. Likewise Parental Encouragement is accompanied by positive Instrumental Orientation towards learning English, and Evaluations of English Classes. Results in multiple regression analyses identified the subscales of the Socio-Educational Model views these composite scales of the Integrativeness Index, the Learning Situation Index, and the Motivation Index as a group of attitudes and motivation whose prime determinant is motivation. Motivation in turn, influences achievement. The study findings in this model identify integrativeness as a weak contributor to CEEB Scores. The findings revealed that the strongest predictor of CEEB Scores of the group of predictors was English Use Anxiety. On the other hand, the results suggest all other variables (subscales on the A-MTB) including the Integrativeness Index as negative and weak predictors of CEEB scores.

Most of the prior research in Puerto Rico suggested the need to evaluate the affective domain. Almost all agree in and outside Puerto Rico that these affective
attributes are important for school success, in any school program. But measuring them is more difficult than assessing cognitive traits or skills. The CEEB just measures cognitive skills, grammar, and verbal comprehension. It might be that the content of the CEEB is different from the specific goals and content aimed at in the humanistic curriculum. If the CEEB does not assess these goals that are so important for school success and preparing Puerto Rican students for a global society, might be the best tool. The Department of Education might have to start thinking about developing other assessment tools that will provide a better measure of their effectiveness in reaching their affective goals.

Discussion

The first objective of this study was to determine if a relationship exists between students' evaluations of the Integrativeness Index, the Motivation Index, the Learning Situation Index, Parental Encouragement, English Class Anxiety, English Use Anxiety, Instrumental Orientation, and CEEB Scores and achievement. All these measures are believed to be associated with second-language learning (Gardner, 1985a). It assesses five general categories of affective dimensions of learning. The category of attitudes toward the Learning Situation Index reflects the students' evaluation of formal ESL instruction in Puerto Rico and is assessed by two scales: Evaluation of the English Teachers and Evaluation of English Classes in the past. The learning experience is expected to provide favorable attitudes toward Integrativeness which reflects students' willingness and interest in having social interaction with the members of the targeted language culture group, or people. This is an essential part of the ESL curriculum in Puerto Rico. Evaluations of English Teachers and Evaluation of English Classes were
weak, indicating that ESL teachers might not be providing the necessary activities to provide for positive Attitudes toward Americans, Attitudes Toward Foreign Languages, Attitudes Toward Foreign People, and Integrative Orientation. This finding is similar to the findings of Perez-Birmingham (1992) who found no significant relationship between attitudes toward Americans and the ESL teachers and class evaluations. Motivation was also conceptualized as a composite score of the students’ Desire to Learn the Language, Attitudes Toward Learning English, and Motivational Intensity (efforts expended to learn the second language). Students evaluated themselves as having the desire to learn English and having certain motivational intensity, but not influencing them enough as to have high scores in the CEEB test.

These study findings revealed that anxiety, which refers to the students’ apprehension or fear in the second-language class, or setting where the language is used, was evaluated as positive in relationship to students scoring higher grades in the CEEB. Based on the literature, anxiety would not underlie or support students’ motivation to learn English as a second language. In this study different levels of anxiety would be responsible for individual differences in second-language acquisition or achievement. Gardner, et al. (1997) conceptualized anxiety as playing somewhat different roles. This is proven in this study. Motivation could be the cause of language anxiety. High levels of motivation should result in high levels of anxiety. Gardner and Maclntyre (1993) indicate that motivation could be both the cause and effect of anxiety. Contextual factors in Puerto Rico are also important. The students’ experiences in the home and the experiences in the community influence their attitudes and their motivation to learn the second language.
The expectation was that all the variables tested would be related to achievement. Most of the studies indicate positive relationships but are supported by causal models verifying these relationships (Gardner, 1983; Tremblay & Gardner, 1995).

**Conclusion**

Expected results of a relationship between the variables measured by the translated version of the A/MTB were evident from this study. Gardner (1985a, 1995) predicted that students' attitudinal, motivational, and anxiety levels were indicators of achievement in a second language. He also predicted that anxiety levels would correlate negatively with achievement. While many research findings have revealed this relationship, in this study it proved different. The following conclusions were made on the findings of this study: Anxiety use was the highest predictor of achievement. In relation to other attitudinal studies that have been carried out in Puerto Rico, this study reinforces the findings of Llado-Berrios (1984), Livoti (1977), Van Trieste (1985), Perez-Birmingham (1992), and Walsh (1994). Those studies, as well as this one, found that Puerto Rican students have low to moderate favorable attitudes toward the English language or its speakers. Another finding that is confirmed by Van Trieste's (1985) and Perez-Birmingham's (1992) studies was that there seems to be little relationship between students' achievement and attitudinal and motivational factors. Oller's (1982) position is that attitudes are weak variables, which may or may not affect achievement. The findings of this study indicate the importance of motivation to achievement. The analysis of this data indicates the importance of research to fully understand the impact of attitudes, motivation, and anxiety factors on ESL achievement.
I reached the following conclusions:

1. Negative attitudes toward the English language or toward English speakers are paramount to the inability students experience in learning English in Puerto Rico.

2. Positive attitudes toward the school environment and towards Integrativeness Index as well as Motivation Index are identified as influential toward Puerto Rican students' achievement.

3. Most of the negative attitudinal findings were not toward the language itself but rather directed toward the English classes, teachers, and foreign people.

4. In the second-language learning context, like that of Puerto Rico, the formal context of the classroom is the crucial environment for language acquisition and in many cases the only experience with the English language. The classroom and the teacher can have a significant positive or negative effect on attitudes toward the learning of English. Krashen (1981) stated that the more positive the attitudes of the students, the more likely language-learning achievement will improve.

5. The findings revealed evidence that the A/MTB can be a positive tool to measure attitudinal/motivational attitudes as well as anxiety levels of the Puerto Rican students.

**Recommendations**

On the basis of these results, observations, and experiences several recommendations for further research are in order.

1. The ability to assess attitudinal/motivational and other related aspects of the affective domain could help ESL teachers to:
a. Empower themselves to empirically determine positive or negative predispositions toward the English language, speakers, and the learning situation itself and the intensity of those predispositions.

b. Generate data to plan and implement intervention programs to foster improvement and change of affective skills.

c. Determine how frequently they need to provide for activities, which will keep ESL students from perceiving English learning as an imposed subject, but rather as a practical tool and a pleasure-seeking experience.

2. ESL educators should understand the complex variables influencing the second-language process in their classroom; and provide a socio-cultural context that is supportive while academically challenging.

3. ESL educators will need to pay more attention not only to the development of the cognitive content, but also to the development of affective sensibility.

4. Prepare staff programs to conduct in-service training in search of possible solutions to reduce negative affective feelings towards foreigners.

5. Provide partnership of public schools and faith communities. Students can benefit from interaction with caring, affective skilled Christian missionaries on the Island.

6. Develop centers that can help students interact with other children from different backgrounds and countries.

7. Develop new initiatives of civic organizations to show there are good people in every community and race.
8. Develop activities in school where teachers and students work together for a common goal to share values and develop commitment to other peers' affective needs.

9. Utilize children's programming on television to foster activities that will motivate students toward preparing them for the sciences where English is needed; bring in model Puerto Ricans working in the best of jobs in the USA.

10. Bring together schools and organizations with unique skills and talents to collectively focus on broad-reaching issues to improve favorable attitudes among Puerto Rican students towards Americans.

11. ESL teachers should be required to develop a quiet diplomacy behind the scenes in classes to teach and model affective behavior.

12. Take a long-term approach to teaching through the schools how American International organizations are fostering and promoting human rights. to neutralize the possible negative effects of American operations in Puerto Rico.

13. Provide more student exchange programs where students have the opportunity to share with American students in the U.S.A.

14. ESL teachers should bring the world into their classroom by sharing the worldwide contributions of prominent Puerto Ricans made possible by their second-language proficiency.

15. Develop a partnership with the Department of Education and the Department of the Family to exchange programs where parents and teachers can share affective concerns about themselves and their children.

16. ESL teachers need to meet with parents after hours, early in the morning, or even at their own homes.
17. Education needs to build a powerful bridge between research and homes and schools. Make sure adults know how vital it is that children have strong affective development even before entering school.

18. Prepare an "advantage center" in every school district, at the malls or in an accessible place. This could be a one stop for parents who want to know and learn more of what they can do to ensure their children's success in ESL learning. Parents in turn can share with other parents.

19. Prepare parent education centers and partnership family involvement in ESL education. Schools can provide family-oriented programs to create collaborations with the community and the ESL programs.

20. Train school staff about this type of research.

21. Devise a program or a system for reporting and analyzing unfavorable attitudes toward other people and negative evaluations toward teachers.

Given the dissatisfaction with second-language teaching and learning programs in Puerto Rico (Baez, 1993) where after 12 or more years of instruction in English most Puerto Ricans lack adequate basic ESL skills it is imperative that alternatives for teaching English in Puerto Rico be explored and empirically verified. One of the primary goals of the English Program Curriculum is essentially humanistic, with a strong emphasis on the affective elements of second-language learning. Affective variables have been recognized as crucial in the second-language learning on the Island. It is therefore necessary to explore and test the affective domain that will support the goal of effective teaching of English as a second language. The Department of Education should pursue and engage in collaborative research with universities and other sources of expert
knowledge to evaluate effectiveness of their ESL program. Research results of this study and other similar ones should be disseminated among ESL teachers in public and private schools. This knowledge can bring forth awareness and inspire the development of affective abilities, moral values, and feelings of solidarity with other teachers and in turn with their students.

**Future Research**

As a result of this study I felt that further statistical analysis should be performed on the same data to test for differences between evaluations of respondents from public and private schools. Also test students' evaluations of parental encouragement by different schools. I also consider doing research using Structural Equation Modeling will provide for a statistical fit of the variables in the A/MTB.

As a result of the study CEEB scores was not the best tool to find relationships between achievement and attitudinal/motivational attributes. I consider research of attitudinal/motivational attributes could be measured and correlated with ESL achievement in some other way than with CEEB scores. I consider that further research on the effectiveness of CEEB assessment as an ESL indicator of achievement must be revised. It would also seem appropriate to complement this type of research with in-depth interviews about students' ESL teaching and learning experiences and following study relationships. Another point to consider for future research is teacher in-put factor. Unfortunately in this study no teacher interview was done. Therefore the information that teachers could provide became an undetermined factor in the study.
It would also seem appropriate to complement this research with complementary students' information pertaining to socio-demographic variables. Much work is still to be done within the Puerto Rican context as to what is happening in the ESL programs. Only through continued investigation on students' attitudes, motivation, and anxiety levels can insights be drawn and English as second language is improved.
APPENDIX A

ADAPTED SPANISH VERSION OF THE ATTITUDE/MOTIVATION TEST BATTERY “ESPEJO DE ACTITUDES”: APRENDIZAJE DEL INGLÉS COMO SEGUNDO IDIOMA EN PUERTO RICO
Espejo de Actitudes: APRENDIZAJE DEL INGLÉS COMO SEGUNDO IDIOMA EN PUERTO RICO.

Espejo de Actitudes es un cuestionario que forma parte de una investigación que intenta estudiar las actitudes y las motivaciones hacia la enseñanza del inglés en Puerto Rico. Es parte de los requisitos para obtener el grado de Doctora en Educación de la profesora Carmen Pérez.

En muchos países del mundo, como por ejemplo, Canadá, los ciudadanos aprenden uno o varios idiomas, además del idioma oficial. Como sabemos, en Puerto Rico, además del español se enseña el inglés como segundo idioma. En la enseñanza de un segundo idioma existen unas variables relacionadas con las actitudes y la motivación que facilitan su aprendizaje. Son esas variables las que nos interesa estudiar.

Hemos escogido a los estudiantes de primer año de universidad, ya que acaban de concluir el grado doce de escuela superior y queremos conocer sus experiencias al haber concluido doce años de estudio del idioma inglés. Queremos señalar que debido a que el segundo idioma que se enseña en Puerto Rico es el inglés, se hace necesario hacer algunas preguntas relacionadas con los Americanos. Estas preguntas no tienen un matiz político. Al igual que en otros países en los que se ha utilizado el cuestionario Espejo de Actitudes, se ha hecho necesario hacer preguntas relacionadas con el o los países donde se habla el segundo idioma que se intenta aprender. Por ejemplo, en el caso de Canadá se hicieron preguntas relacionadas con los Franceses, ya que el Frances es el segundo idioma.

Las respuestas que nos das en el cuestionario son estrictamente confidenciales, simplemente nos interesa conocer tus impresiones sobre lo que te preguntamos.

Te recordamos que no vas a escribir en el cuestionario, sino en la hoja de contestaciones. En el cuestionario vas a seleccionar las respuestas y ennegrecerás los círculos correspondientes en la hoja de contestaciones.

Por favor, indica en la hoja de contestaciones:
A. El número del cuestionario que aparece en la portada.
B. El puntaje en el SAT o CEEB.
C. Los últimos cuatro (4) dígitos en su número de estudiante.

INSTRUCCIONES:
► Usa lapiz de carbon.
► No uses bolígrafo.
► Contesta en la hoja de contestaciones.
► Borra sin dejar huellas en el papel.
► Contesta así: • O O O
### Lista 1

**Para contestar pregunta #6.**

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<tr>
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</tr>
<tr>
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</tr>
<tr>
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<td>Haitiano</td>
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<td>Mexicano</td>
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### Lista 2

**Lista de Municipios de Puerto Rico y sus Códigos**

**Para contestar pregunta #11.**

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<td>Aibonito</td>
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<td>Añasco</td>
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<td>Arroyo</td>
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<td>Barranquitas</td>
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<td>Camuy</td>
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<td>Canóvanas</td>
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<td>Carolina</td>
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<td>Cataño</td>
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<td>Cayey</td>
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<td>Ceiba</td>
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</tbody>
</table>

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INFORMACIÓN DEMOGRAFICA

Las aseveraciones siguientes ofrecen información general sobre cada participante. Esta información es de vital importancia para este estudio. Contesta cada pregunta y ennegrezca el círculo correspondiente en la hoja de contestaciones.

1. ¿En qué nivel de inglés te encuentras?
   (0) Pre-Básico I
   (2) Pre-Básico II
   (3) Básico I
   (4) Intermedio I
   (5) Intermedio II
   (6) Honores

2. Escribe tu edad en la hoja de contestaciones y ennegrezca el círculo correspondiente.

3. Estado Civil:
   (0) Soltero(a)
   (2) Casado(a)
   (3) Divorciado(a)
   (4) Viudo(a)
   (5) Conviviendo

4. ¿Cuál es tu género?
   (0) Masculino
   (2) Femenino

5. ¿Con cuál de tus padres vives?
   (0) Vivo con mi padre y mi madre.
   (2) Vivo con mi madre solamente.
   (3) Vivo con mi padre solamente.

6. ¿Cómo te describes? (Para contestar la pregunta #6 escoge de la lista #1 del papel azul.

7. ¿Has vivido en los Estados Unidos?
   (0) Sí
   (2) No (Si contestó NO, vaya a la pregunta 10)

8. Indica el tiempo:
   (0) Menos de seis meses
   (2) De 7 meses a un año
   (3) De un año y un mes a 3 años
   (4) De 3 años y un mes a 7 años
   (5) De 7 años y un mes a 10 años
   (6) Más de 10 años
   (7) No aplica

9. Indica el propósito por el cual vivistes en Estados Unidos:
   (0) Vacaciones
   (2) Vivir fuera por estudios
   (3) Mis padres se mudaron
   (4) Empleo
   (5) Otro
   (6) No aplica

10. ¿A qué escuela asististe por los últimos doce años?
    (0) Privada
    (2) Pública
    (3) Ambas

11. ¿Cuál es tu pueblo de residencia permanente? (Hospedaje no aplica) (Para contestar la pregunta #11 escoge de la lista #2 del papel azul.

12. ¿Cuál es el ingreso anual aproximado de tu familia?
    (0) Menos de $5,000
    (2) $5,001 - $10,000
    (3) $10,001 - $20,000
    (4) $20,001 - $30,000
    (5) $30,001 - $40,000
    (6) $40,001 - $50,000
    (7) $50,001 - o más

13. ¿Por lo general qué idioma lees?
    (0) Sólo español
    (2) Más español que inglés
    (3) Más inglés que español
    (4) Sólo inglés

14. ¿Por lo general en qué idioma piensas?
    (0) Sólo español
    (2) Más español que inglés
    (3) Más inglés que español
    (4) Sólo inglés

15. ¿Por lo general que idioma hablas en tu casa?
    (0) Sólo español
    (2) Más español que inglés
    (3) Más inglés que español
    (4) Sólo inglés

16. ¿Por lo general qué idioma hablas con tus amigos?
    (0) Sólo español
    (2) Más español que inglés
    (3) Más inglés que español
    (4) Sólo inglés

17. ¿Quiénes de las siguientes personas nacieron en los Estados Unidos?
    17 a. Tú
    17 b. Tu madre
    17 c. Tu padre
    17 d. Por lo menos uno de tus abuelos

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En el cuestionario vas a señalar el grado de acuerdo o desacuerdo que estás en relación a las premisas que te presentamos. Hay siete posibles contestaciones. Desde «Neutral» hacia la izquierda hasta llegar «En Total Desacuerdo» hay tres posibles respuestas y de «Neutral» hacia la derecha hasta llegar «En Total Acuerdo» hay también tres posibles respuesta. No hay contestaciones buenas o malas. Selecciona y ennegrece una respuesta solamente en la hoja de contestaciones.

<table>
<thead>
<tr>
<th>En Total Desacuerdo</th>
<th>En Desacuerdo Moderado</th>
<th>En Poco Desacuerdo</th>
<th>Neutral</th>
<th>En Poco Acuerdo</th>
<th>En Acuerdo Moderado</th>
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</table>

18. Si visitara un país extranjero me gustaría hablar el idioma de su gente.

19. Aunque Puerto Rico es un país que está lejos de otros países que hablan idiomas extranjeros, es importante para los puertorriqueños aprender otros idiomas.

20. Desearía hablar otro idioma perfectamente.

21. Quisiera poder leer la literatura de otro idioma en la lengua original en vez de en traducciones.

22. A veces quisiera poder leer los periódicos y las revistas en otro idioma.

23. Realmente quisiera aprender otros idiomas.

24. Si planificara quedarme en otro país por un tiempo, haría un gran esfuerzo por hablar el idioma, aunque pudiese comunicarme en español.

25. Tomaría clases de otros idiomas en el colegio, aunque no fuera requisito.

26. Disfruto reunirme y escuchar a otra gente que hable otro idioma.

27. Estudiar idiomas es una experiencia deleitable.
PARTE II: ACTITUDES HACIA LOS EXTRANJEROS: DOMINICANOS, CUBANOS, HISPANOS, HAITIANOS, ETC.

- Recuerda contestar en la hoja de contestaciones.

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<tr>
<th>En Total</th>
<th>En Desacuerdo</th>
<th>En Poco Desacuerdo</th>
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<th>En Poco Acuerdo</th>
<th>En Acuerdo</th>
<th>En Total Acuerdo</th>
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</thead>
<tbody>
<tr>
<td>28. Los extranjeros son considerados y con sentimientos hacia otros</td>
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<td>2</td>
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<tr>
<td>29. Tengo una actitud favorable hacia los extranjeros</td>
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<td>2</td>
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<tr>
<td>30. Mientras más escucho hablar de los extranjeros, más los aprecio</td>
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<tr>
<td>31. Los extranjeros son personas confiables</td>
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<tr>
<td>32. Siempre he admirado a los extranjeros</td>
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<tr>
<td>33. Los extranjeros son amigables y hospitalanos</td>
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<tr>
<td>34. Los extranjeros amigables tienen sentido del humor</td>
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</tr>
<tr>
<td>35. Me gustaría llegar a conocer a los extranjeros un poco mejor</td>
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<tr>
<td>36. Los extranjeros son generosos y cordiales.</td>
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<tr>
<td>37. Los extranjeros, en su mayoría, son sinceros y honestos</td>
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¿Cansado? ¡Cómo va a ser! ¡Apenas comienzas! ¡Tomate un descansito!
PARTE III: ACTITUDES HACIA EL APRENDIZAJE DEL INGLÉS

- Recuerda contestar en la hoja de contestaciones.

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38. Aprender inglés es grandioso. .................
39. Verdaderamente disfruto aprendiendo inglés. ........................................
40. El Inglés siempre ha sido parte importante en los programas de escuela. ..............
41. Planifico aprender buen inglés como me sea posible. ........................................
42. Me encanta aprender inglés. ......................
43. Odio el inglés. ......................................
44. Me gustaría pasar el tiempo estudiando sobre otras materias más que inglés. ..... 
45. Aprender inglés es una pérdida de tiempo. ........................................................
46. Creo que aprender inglés es acertado. .................................................................
47. Cuando salga de la escuela dejaré de aprender inglés porque no me interesa aprenderlo. .................................................................

¡Lo estás haciendo muy bien!
• Recuerda contestar en la hoja de contestaciones.

### A. ORIENTACIÓN HACIA LA INTEGRACIÓN DE LA CULTURA

48. Estudiar el inglés puede ser importante para mí porque me permitirá estar más atento con los americanos. ........................................

49. Estudiar el inglés puede ser importante porque proporciona la capacidad de conversar y conocer una variedad de personas. ........................................

50. Estudiar el inglés puede ser importante para mí porque podré entender y apreciar mejor su arte y literatura. ........................................

51. Estudiar el inglés puede ser importante para mí porque podré participar libremente en las actividades de otros grupos culturales. ....

### B. ORIENTACIÓN INSTRUMENTAL

52. Estudiar inglés puede ser importante para mí porque lo necesito para mi carrera. ....

53. Estudiar inglés puede ser importante para mí porque me convertirá en una persona de más conocimiento. ........................................

54. Estudiar inglés puede ser importante para mí porque me ayudará a conseguir mejor empleo. ........................................

55. Estudiar inglés puede ser importante para mí porque otros me respetarán al conocer que hablo otro idioma. ........................................

### C. ANSIEDAD EN EL SALÓN DE INGLÉS

56. Me siento avergonzado si tengo que contestar en inglés en el salón de clases. 

57. Nunca me siento totalmente seguro cuando hablo el inglés en el salón de clases. ....

58. Siempre siento que otros hablaran mejor inglés que yo en el salón: ........................................

59. Me pongo nervioso y confundido cuando hablo inglés en el salón de clases. ....

60. Siento temor de que otros se rían de mí al hablar inglés en el salón de clases. ....
### PARTE IV: D, E

#### D. ANSIEDAD EN EL USO DEL INGLÉS

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- Me siento avergonzado si tengo que hablar inglés fuera del salón de clases.
- Nunca me siento totalmente seguro cuando hablo inglés fuera del salón.
- Siempre siento que otros hablan mejor que yo fuera del salón.
- Me pongo nervioso y confundido cuando hablo inglés fuera del salón.
- Siento temor de que otros se rían de mí al hablar inglés fuera del salón.

#### E. ESTÍMULO DE LOS PADRES

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- Mis padres tratan de ayudarme con el inglés.
- Mis padres sienten que porque vivimos en Puerto Rico debo aprender a hablar inglés.
- Mis padres consideran que debo seguir aprendiendo inglés a través de mis estudios universitarios.
- Mis padres consideran que debo dedicarle más tiempo al estudio del inglés.
- Mis padres siempre me estimulan a estudiar el inglés.
- Mis padres me muestran interesados en todo lo que tiene que ver con mis clases de inglés.
- Mis padres me estimulan a practicar el inglés siempre que sea posible.
- Mis padres me han enseñado el valor de saber hablar y entender el inglés en el futuro.
- Mis padres creen que debo de tratar de aprender inglés cueste lo que cueste.
- Mis padres me han enseñado a buscar ayuda de mis profesores cuando tengo problemas con el inglés.
### PARTE V: MOTIVACIÓN E INTENSIDAD

Seleciona y marca en la hoja de contestaciones.

#### 76. Piensa en lo que aprendí en mis clases de Inglés...
- a. frecuentemente
- b. casi nunca
- c. a veces

#### 77. Si no se enseñara el inglés en las escuelas.
- a. Lo trataría de aprender a través de periódicos, películas, libros, etc.
- b. No me preocuparía en aprenderlo.
- c. Trataría de conseguir un curso en cualquier otra parte.

#### 78. Cuando tengo problemas de comprensión con la clase de Inglés...
- a. Inmediatamente le pregunto a la maestra
- b. Busco ayuda antes del examen.
- c. Lo olvido.

#### 79. Cuando tengo tareas de la clase de Inglés...
- a. Le pongo interés, pero no lo más que debiera.
- b. Hago el trabajo cuidadosamente, tomando en cuenta que entendi todo.
- c. Sólo lo repaso por encima.

#### 80. Considerando cómo estudio para la clase de Inglés puedo decir con honestidad...
- a. Hago sólo lo mínimo.
- b. Estudio por estudiar, si paso será suerte, porque no lo hago lo suficiente.
- c. Trato de aprender el máximo.

#### 82. Cuando me regresan las tareas...
- a. Las escribo de nuevo corrigiendo los errores.
- b. Las guardo y las olvido.
- c. Las repaso, pero no corrojo mis errores.

#### 83. Cuando estoy tomando la clase de Inglés:
- a. Contesto voluntariamente todas las preguntas que pueda.
- b. Sólo contesto las que son fáciles.
- c. Nunca digo nada.

#### 84. Si tuviera una estación de radio en inglés:
- a. Nunca la escucharía.
- b. La pondría ocasionalmente.
- c. Trataría de escucharla a menudo.

#### 85. Cuando escucho canciones en inglés por la radio:
- a. Escucho la música poniendo atención a las palabras fáciles.
- b. Escucho con atención tratando de entender todas las palabras.
- c. Cambio la estación.
PARTE VI: DESEO DE APRENDER INGLÉS

Se selecciona y marca en la hoja de contestaciones.

86. Durante la clase de inglés, me gustaría...
   1. a. Tener siempre una combinación de inglés y español.
   2. b. Escuchar más inglés que español.
   3. c. Sólo escuchar inglés.

87. Si tuviese la oportunidad de hablar inglés fuera de la clase, yo...
   1. Nunca lo hablaría.
   2. Hablaría inglés un poco.
   3. Lo hablaría ocasionalmente, cuando fuera necesario.

88. Comparada con otras clases, me gusta la de inglés...
   1. Lo máximo.
   2. Igual que otras clases
   3. La menos de todas.

89. Si hubiese un club de inglés en la escuela...
   1. Asistiría a las reuniones de vez en cuando.
   2. Estaría deseoso de unirse a él.
   3. Nunca me uniría a ese club.

90. Si estuviese de mi parte tomar la clase de inglés, yo...
   1. La tomaría.
   2. La dejaría.
   3. No sé si la tomaría o no.

91. Encuentro el estudio del inglés...
   1. Poco interesante.
   2. Más interesante que otras clases.

92. Si tuviese la oportunidad y supiera suficiente inglés, vería programas y películas en ese idioma...
   1. A veces.
   2. Rara vez.
   3. Nunca.

93. Si tuviese la oportunidad de ver una obra en inglés...
   1. Asistiría si no tuviese otra cosa que hacer
   2. Definitivamente iría.
   3. No iría nunca.

94. Si conociera una familia americana en mi vecindad...
   1. No hablaría inglés con ellos nunca.
   2. Hablaría inglés con ellos a veces.
   3. Hablaría inglés con ellos siempre que pudiera.

95. Si tuviera la oportunidad y supier suficiente inglés, leería periódicos y revistas en ese idioma.
   1. Siempre que pudiera.
   2. A veces.
   3. Nunca.

PARTE VII: ÍNDICE DE ORIENTACIÓN

96. Estudio inglés porque...
   1. Se que me será útil para conseguir empleo.
   2. Me capacitará para entender mejor a los americanos y su estilo de vida.
   3. Me permitirá conversar con una variedad de personas.
   4. Conocer dos idiomas me permitirá ser un profesional mejor educado.

Me dijeron que era cuestión de llenar bolitas solamente... ¡Pero no me dijeron cuántas!
97. Los americanos son personas sociables, de corazón tierno y creativos .................

98. Quisiera conocer más sobre los americanos ......................................................

99. Los americanos añaden un sabor distintivo a la cultura puertorriqueña ..........

100. Los puertorriqueños deben hacer un esfuerzo para aprender inglés .............

101. Mientras más llego a conocer a los americanos, más quisiera hablar su idioma .................................................................

102. Muchos de nuestros ciudadanos son de descendencia americana ............

103. La herencia americana es una parte importante de nuestra identidad puertorriqueña ..............................................................

104. Si Puerto Rico perdiese la cultura americana de los Estados Unidos sería realmente una pérdida muy grande .........

105. Los americanos han ayudado a preservar la belleza de nuestro quehacer puertorriqueño ..................................................

106. Muchos americanos son tan amigables que es fácil llevarse bien con ellos. Puerto Rico es afortunado en tenerlos con nosotros .................................................................
PARTE IX: MAESTROS Y CLASES DE INGLÉS

Esta parte del cuestionario se usará para determinar tus impresiones acerca de tus maestros de inglés y sus clases de primer grado a duodécimo. Te vamos a presentar una serie de palabras para que describas tanto a tus maestros como a las clases de inglés. Cada palabra tiene su opuesto separado por siete líneas. Vas a ubicar tu respuesta en una de las siete líneas y ennegrecerás el círculo y número que represente la línea en la hoja de contestaciones. A continuación presentamos algunos ejemplos.

Ejemplo 1: Si las palabras en los extremos de la escala describen fuertemente tus ideas o impresiones acerca de tus maestros y/o clases de inglés marca así:

- amigable ➤ no amigable

Ejemplo 2: Si las palabras en los extremos de la escala describen un poco tus ideas o impresiones acerca de tus maestros y/o clases de inglés marca así:

- amigable ➤ no amigable

Ejemplo 3: Si las palabras en los extremos de la escala describen muy poco tus ideas o impresiones acerca de tus maestros y/o clases de inglés marca así:

- amigable ➤ no amigable

Ejemplo 4: Si las palabras en los extremos de la escala a partir de no estar relacionadas a tus ideas o impresiones acerca de tus maestros y/o clases de inglés marca así:

- amigable ➤ no amigable

Ejemplo 5: Si fueras a marcar tus impresiones sobre tus maestros y clases de inglés marcarias así:

- amistosa ➤ no amistosa

Los reactivos del 107 al 131 los contestarás en relación a tus maestros de inglés del primer grado al duodécimo.

MIS MAESTROS DE INGLÉS EN EL PASADO (EN GENERAL)

<table>
<thead>
<tr>
<th>107. eficientes</th>
<th>111. hipócritas</th>
<th>115. inaccesibles</th>
<th>111. amigables</th>
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MIS MAESTROS DE INGLÉS EN EL PRESENTE (EN GENERAL)

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MIS MAESTROS DE INGLÉS EN EL FUTURO (EN GENERAL)

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EJESPO DE ACTITUDES: APRENDIZAJE DEL INGLÉS COMO SEGUNDO IDIOMA EN PUERTO RICO

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127. monótonos 128. se puede depender 129. desinteresados 130. desconsiderados 131. impactantes

Los reactivos del 132 al 156 los contestarás en relación a tus clases de inglés del primer grado al duodécimo.

**MIS CLASES DE INGLES EN EL PASADO (EN GENERAL)**

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 ¡Muchas gracias por tu cooperación!

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APPENDIX B

THE ORIGINAL ATTITUDES/MOTIVATION TEST BATTERY
(GARDNER, 1985)
INSTRUCTIONS

The following instructions precede the Likert form items. The items are presented in a random order, and for school children each item is typically followed by the scale as indicated in the example below. Other versions used for university level students use the format as suggested by Adorno, Frenkel-Brunswik, Levinson and Sanford (1950).

Following are a number of statements with which some people agree and others disagree. There are no right or wrong answers since many people have different opinions. We would like you to indicate your opinion about each statement by circling the alternative below it which best indicates the extent to which you disagree or agree with that statement.

Following is a sample item. Circle the alternative below the statement which best indicates your feeling.

1. Canadian hockey players are better than Russian hockey players.
   
   Strongly Moderately Slightly Neutral Slightly Moderately Strongly
   Disagree Disagree Disagree Agree Agree Agree

   In answering this question, you should have circled one of the above alternatives. Some people would circle Strongly Disagree, others would circle Strongly Agree, and still others would circle one of the alternatives in between. Which one you circled would indicate your own feelings based on everything you know and have heard. Note, there is no right or wrong answer. All that is important is that you indicate your personal feeling.

   Please give your immediate reactions to each of the following items. Don't waste time thinking about each statement. Give your immediate feeling after reading each statement. On the other hand, please do not be careless, as it is important that we obtain your true feelings.

The following instructions precede the items for the scales, Motivational Intensity, Desire to Learn French, and Orientation Index. The scoring key is not shown on the questionnaire when administered, and the items are presented in a random order.

Please answer the following items by circling the letter of the alternative which appears most applicable to you. We would urge you to be as accurate as possible since the success of this investigation depends upon it.

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Appendix A.1

Attitudes toward French Canadians
1. French Canadians are a very sociable, warm-hearted and creative people.
2. I would like to know more French Canadians.
3. French Canadians add a distinctive flavor to the Canadian culture.
4. English Canadians should make a greater effort to learn the French language.
5. The more I get to know the French Canadians, the more I want to be fluent in their language.
6. Some of our best citizens are of French Canadian descent.
7. The French-Canadian heritage is an important part of our Canadian identity.
8. If Canada should lose the French culture of Quebec, it would indeed be a great loss.
9. French Canadians have preserved much of the beauty of the old Canadian folkways.
10. Most French Canadians are so friendly and easy to get along with that Canada is fortunate to have them.

Interest in Foreign Languages
1. If I were visiting a foreign country I would like to be able to speak the language of the people.
2. Even though Canada is relatively far from countries speaking other languages, it is important for Canadians to learn foreign languages.
3. I wish I could speak another language perfectly.
4. I want to read the literature of a foreign language in the original language rather than a translation.
5. I often wish I could read newspapers and magazines in another language.
6. I would really like to learn a lot of foreign languages.
7. If I planned to stay in another country, I would make a great effort to learn the language even though I could get along in English.
8. I would study a foreign language in school even if it were not required.
9. I enjoy meeting and listening to people who speak other languages.
10. Studying a foreign language is an enjoyable experience.
Appendix A.1 continued

Attitudes toward European French People
1. The European French are considerate of the feelings of others.
2. I have a favorable attitude towards the European French.
3. The more I learn about the European French, the more I like them.
4. The European French are trustworthy and dependable.
5. I have always admired the European French people.
6. The European French are very friendly and hospitable.
7. The European French are cheerful, agreeable and good humoured.
8. I would like to get to know the European French people better.
9. The European French are a very kind and generous people.
10. For the most part, the European French are sincere and honest.

Attitudes toward Learning French

Positively Worded Items
1. Learning French is really great.
2. I really enjoy learning French.
3. French is an important part of the school programme.
4. I plan to learn as much French as possible.
5. I love learning French.

Negatively Worded Items
6. I hate French.
7. I would rather spend my time on subjects other than French.
8. Learning French is a waste of time.
9. I think that learning French is dull.
10. When I leave school, I shall give up the study of French entirely because I am not interested in it.
Appendix A.1 continued

Integrative Orientation

1. Studying French can be important to me because it will allow me to be more at ease with fellow Canadians who speak French.
2. Studying French can be important for me because it will allow me to meet and converse with more and varied people.
3. Studying French can be important for me because it will enable me to better understand and appreciate French Canadian art and literature.
4. Studying French can be important for me because I will be able to participate more freely in the activities of other cultural groups.

Instrumental Orientation

1. Studying French can be important for me only because I'll need it for my future career.
2. Studying French can be important for me because it will make me a more knowledgeable person.
3. Studying French can be important to me because I think it will someday be useful in getting a good job.
4. Studying French can be important for me because other people will respect me more if I have a knowledge of a foreign language.

French Class Anxiety

1. It embarrasses me to volunteer answers in our French class.
2. I never feel quite sure of myself when I am speaking in our French class.
3. I always feel that the other students speak French better than I do.
4. I get nervous and confused when I am speaking in my French class.
5. I am afraid the other students will laugh at me when I speak French.

Parental Encouragement

1. My parents try to help me with my French.
2. My parents feel that because we live in Canada, I should learn French.
3. My parents feel that I should continue studying French all through school.
4. My parents think I should devote more time to my French studies.
5. My parents really encourage me to study French.
Appendix A.1 continued

(4)

6. My parents show considerable interest in anything to do with my French courses.

7. My parents encourage me to practise my French as much as possible.

8. My parents have stressed the importance French will have for me when I leave school.

9. My parents feel that I should really try to learn French.

10. My parents urge me to seek help from my teacher if I am having problems with my French.
Appendix A.2

Items for the Scales Using the Multiple Choice Format

Motivational Intensity

Scoring

Key

1. I actively think about what I have learned in my French class:

   3 a) very frequently.
   1 b) hardly ever.
   2 c) once in awhile.

2. If French were not taught in school, I would:

   2 a) pick up French in everyday situations (i.e., read French books and newspapers, try to speak it whenever possible, etc.).
   1 b) not bother learning French at all.
   3 c) try to obtain lessons in French somewhere else.

3. When I have a problem understanding something we are learning in French class, I:

   3 a) immediately ask the teacher for help.
   2 b) only seek help just before the exam.
   1 c) just forget about it.

4. When it comes to French homework, I:

   2 a) put some effort into it, but not as much as I could.
   3 b) work very carefully, making sure I understand everything.
   1 c) just skim over it.

5. Considering how I study French, I can honestly say that I:

   2 a) do just enough work to get along.
   1 b) will pass on the basis of sheer luck or intelligence because I do very little work.
   3 c) really try to learn French.

6. If my teacher wanted someone to do an extra French assignment, I would:

   1 a) definitely not volunteer.
   3 b) definitely volunteer.
   2 c) only do it if the teacher asked me directly.

7. After I get my French assignments back, I:

   3 a) always rewrite them, correcting my mistakes.
   1 b) just throw them in my desk and forget them.
   2 c) look them over, but don't bother correcting mistakes.
Appendix A.2 continued

Scoring Key

8. When I am in French class, I:
   3 a) volunteer answers as much as possible.
   2 b) answer only the easier questions.
   1 c) never say anything.

9. If there were a local French T.V. station, I would:
   1 a) never watch it.
   2 b) turn it on occasionally.
   3 c) try to watch it often

10. When I hear a French song on the radio, I:
   2 a) listen to the music, paying attention only to the easy words.
   3 b) listen carefully and try to understand all the words
   1 c) change the station

Desire to Learn French

Scoring Key

1. During French class, I would like:
   2 a) to have a combination of French and English spoken.
   1 b) to have as much English as possible spoken.
   3 c) to have only French spoken.

2. If I had the opportunity to speak French outside of school, I would:
   1 a) never speak it.
   3 b) speak French most of the time, using English only if really necessary.
   2 c) speak it occasionally, using English whenever possible.

3. Compared to my other courses, I like French:
   3 a) the most.
   2 b) the same as all the others.
   1 c) least of all.

4. If there were a French Club in my school, I would:
   2 a) attend meetings once in awhile.
   3 b) be most interested in joining.
   1 c) definitely not join.
Appendix A.2 continued

Scoring Key

5. If it were up to me whether or not to take French, I:
   a) would definitely take it.
   b) would drop it.
   c) don’t know whether I would take it or not.

6. I find studying French:
   a) not interesting at all.
   b) no more interesting than most subjects.
   c) very interesting.

7. If the opportunity arose and I knew enough French, I would watch French T.V. programmes:
   a) sometimes.
   b) as often as possible.
   c) never.

8. If I had the opportunity to see a French play, I would:
   a) go only if I had nothing else to do.
   b) definitely go.
   c) not go.

9. If there were French-speaking families in my neighbourhood, I would:
   a) never speak French with them.
   b) speak French with them sometimes.
   c) speak French with them as much as possible.

10. If I had the opportunity and knew enough French, I would read French magazines and newspapers:
   a) as often as I could.
   b) never.
   c) not very often.

Orientation Index

1. I am studying French because:
   a) I think it will some day be useful in getting a good job.
   b) I think it will help me to better understand French people and way of life.
   c) It will allow me to meet and converse with more and varied people.
   d) A knowledge of two languages will make me a better-educated person.
Appendix A.3
Semantic Differential Assessments of My French Teacher
and My French Course

Instructions

The purpose of this part of the questionnaire is to determine your ideas and impressions about your French Course and your French Teacher. We call these things concepts. In answering this section, you will be asked to rate these concepts on a number of scales. On the following pages, there is a concept given at the top of the page, and below that a group of scales. You are to rate each concept on each of the scales in order. Following is how you are to use the scales.

If the word at either end of the scale very strongly describes your ideas and impressions about the concept at the top of the page, you would place your checkmark as shown below:

MY FRENCH TEACHER

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APPENDIX C

PERMISSION LETTERS
August 3, 2001

Adventist University of the Antilles
P.O. Box 118
Mayaguez
Puerto Rico 00681

To Whom It May Concern:

This is to verify that Carmen Cortez has been granted permission by the Humans Subjects Review Board/Institutional Review Board of Andrews University, to conduct research in Puerto Rico for her project: *Attitudes and Motivation: A study of their relationships to achievement in second language learning in Puerto Rico*.

Her target population consists of first year college students and will be conducted in Mayaguez, Puerto Rico.

If you have any questions concerning Andrews University's granting her permission to conduct this research, please contact me at extension number 6361.

Yours truly,

Michael D Pearson
Office of Scholarly Research
15 de junio de 2001

Dra. Myrna Colón
Presidenta
Universidad Adventista de las Antillas
Box 118
Mayagüez, PR 00681

Estimada doctora Colón:

De acuerdo a la petición que nos hiciera en su carta del 30 de mayo y después de haber hecho las debidas consultas con el Rector Interino y con el Director del Departamento de Inglés, nos complace autorizar a la Prof. Carmen Cortés Rodríguez para que lleve a cabo el estudio al cual hace referencia en dicha carta. Más aún, deseamos solicitarle que nos provea los resultados de dicho estudio a través del Dr. José Irizarry.

Cabe mencionar que aunque recibiremos su visita o visitas con beneplácito, ello no constituye ningún tipo de relación patrono-empleado por lo que no existe ningún compromiso del Recinto Universitario de Mayagüez de remunerar en forma alguna las labores de investigación que se lleven a cabo.

Sin otro particular por el momento, quedo de usted

Cordialmente,

René S. Vieta, Ph.D.
Decano Interino

RSV/ndg

c Prof. Pablo Rodríguez
Rector Interino

Dr. José Irizarry
Director, Departamento de Inglés
From: aarji@.vc.com
To: carmen perez <carmerce@hotmail.com>
Subject: Re: UTU Puerto Rico
Date: Tue, 14 Apr 2002 12:03:38 -0400

http://lwwl.law.l4.hotmai1.msn.com/cgi-bin/getmsg?curmbox=F998599009&a=55c7d6c. 6 18 2002
January 10, 2002

Dr. Robert Gardner  
University of Western Ontario  
London, Canada  

Dear doctor Gardner:

Greetings from Puerto Rico!

Mrs. Carmen Cortes-Rodriguez is professor at our University in the Humanities Department. She is writing her dissertation proposal for her doctorate. The title of her study is *Attitudes, and Motivation: A Study of their Relationships to Achievement in Second Language Learning in Puerto Rico*. She is interested in using the Attitude/Motivation Test Battery.

She is requesting permission to use and translate this measure in Spanish and adapt the items for the Puerto Rican Context and first year college students. Please feel free to contact her for any information you may need in relation to her study. You can call her at the University at (787) 834-9595, ext. 2211 or collect to the (787) 265-8306.

I would highly appreciate if you can send us a copy of the AMTB as well as any information concerning its validity and reliability.

Thank you in advance for your cooperation and attention to this matter.

Sincerely yours,

Otoniel Cabrera  
Vice President for Academic Affairs  
Antillean Adventist University

Carmen Cortes-Rodriguez  
Doctoral Student  
Andrews University
APPENDIX D

CONSENTMENT SHEET
CONSENTIMIENTO INFORMADO

Yo, ________________________________, acepto participar en el estudio: "Actitudes y Motivación hacia la Enseñanza del Inglés como Segundo Idioma en Puerto Rico", que realiza la Sra. Carmen Pérez como requisito para obtener el grado de Doctorado en Educación. Hago constar que estoy enterado(a) del propósito del mismo y que entiendo cuál es mi función como participante así como el proceso en el cual estaré involucrado(a). Además, se me ha informado que dicha participación no conlleva riesgo alguno.

Entiendo que mi participación es libre y voluntaria, por lo cual puedo negarme a participar. También, se que podría retirarme en cualquier momento, si así lo deseo, sin que esto conlleve penalidad alguna.

De igual forma, entiendo que la información que ofrezca se mantendrá bajo estricta confidencialidad y que no se utilizará mi nombre o cualquier otra información que pueda identificarme. Si en algún momento deseo obtener información adicional relacionada con este proyecto puedo contactar a la Sra. Carmen Pérez al teléfono 787-834-9595.

Se releva al Departamento de Educación de toda responsabilidad por cualquier reclamación que pueda surgir como consecuencia de la administración del cuestionario y de la información que se solicita y provea a través del mismo.

__________________________________________________________________________
Fecha

__________________________________________________________________________
Firma
APPENDIX E

SCHEMATIC REPRESENTATION OF THE CONCEPT OF MOTIVATION AS IT RELATES TO THE STUDY IN PUERTO RICO
REFERENCE LIST


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VITA
VITA

Carmen Cortes de Perez
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Mayaguez PR 00681
Phone: (787) 834-9595

BACKGROUND
Date of Birth November 30, 1954
Place of Birth New York, City
Husband’s Name Abelardo Perez Gonzalez
S. S. Number 583-70-3173
Language Skills Bilingual (English and Spanish)
Children Keila (22) and Kenia (20)

EDUCATION
Masters Degree in teaching English Second or other Language (TESOL)
Interamerican University – San German, Puerto Rico May 1987

Bachelors Degree In Elementary Education
Antillean College – Mayaguez, Puerto Rico

Associate in Arts in Elementary Education
Antillean College – Mayaguez, Puerto Rico

FULL-TIME PROFESSIONAL AND TEACHING EMPLOYMENT
1997 – Present ESL Professor Department of Humanities Antillean
Adventist University, Mayaguez, PR.

1997 – 1998 Vice President for Planning and Development. Antillean
Adventist University, Mayaguez, PR.

1996 – Present Federal Consultant for Federal Affairs in the west coast of
Puerto Rico.

1995 – 1996 Director for Alumni and Public Relations Antillean
Adventist University, Mayaguez, PR.

1995 – Present Federal Reader for Higher Education, Department of
Education. USA.

1995 – Present Grant writer for Local, Educational and National affairs in
Puerto Rico

1993 – Present Consultant for Federal Affairs San Sebastian, Puerto Rico
<table>
<thead>
<tr>
<th>Year Range</th>
<th>Position Description</th>
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</thead>
<tbody>
<tr>
<td>1991 - Present</td>
<td>Professor for the Humanities Department Antillean Adventist University, Mayaguez, PR</td>
</tr>
<tr>
<td>1991 - Present</td>
<td>Federal Reviewer</td>
</tr>
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| 1990 - 1991 | Title III Coordinator  
Federal Programs Director  
Antillean Adventist University, Mayaguez, PR |
| 1988 - 1989 | Federal Programs Director |
| 1988 - 1990 | Federal Programs Assistant  
Title III Program Development Director  
Antillean University, Mayaguez, Puerto Rico |
| 1987 - 1988 | Federal Programs Assistant  
Antillean University, Mayaguez, Puerto Rico |
| 1982 - 1987 | Professor  
Education and Humanities Departments  
Antillean University, Mayaguez, Puerto Rico |
| 1980 - 1982 | Principal  
Adventist Academy  
San Sebastian, Puerto Rico |
| 1974 - 1980 | Teacher  
Seventh-Day Adventist Academies  
West Puerto Rico Conference |