Since Scovel's review of the literature in 1978, several studies have been conducted that consider the role of anxiety in language learning. This paper examines the perspectives from which foreign language anxiety research has been conducted, the instruments that have been used, and the results that have been reported. Three approaches to the study of anxiety are identified as the trait, state, and situation specific perspectives. The instruments chosen to measure anxiety have been quite varied, with several scales specifically intended to assess foreign language anxiety. The literature to be reviewed comes from studies of children, studies that have included anxiety in models of language learning, and finally, studies that are focused directly on the role of anxiety in language learning. With

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the advances in theory and measurement that have been made in the past decade or so, it is anticipated that foreign language anxiety will receive much more research consideration.

Anxiety poses several potential problems for the student of a foreign language because it can interfere with the acquisition, retention, and production of the new language. Until recently, the effects of anxiety on language learning had been notoriously difficult to demonstrate and conflicting conclusions had been reached as to its effect. In the past few years, advances in theory and measurement have enabled more research into foreign language anxiety. This paper will review the literature concerned with anxiety experienced in a foreign or second language context. Related constructs, such as self-confidence and introversion, will also be examined.

For several years, the literature in this area was scattered and somewhat difficult to interpret. Smart, Elton, and Burnett (1970) stated that language “researchers have exhibited a somewhat single-minded obsession with intelligence and aptitude as the predictor variables” (p. 416). Three years later, Brown (1973) considered the scant available data related to affective variables in language learning, including anxiety, but found more questions than answers. Several of the lines of inquiry suggested by Brown have yet to be explored, although progress has been made in some fields. One of the more promising areas has been research into foreign language anxiety and related constructs. Brown predicted that “the self-knowledge, self-esteem, and self-confidence of the language learner could have everything to do with success in learning a language” (p. 233). Inhibition (or anxiety) was also considered to be a key affective variable, although little research was available on the subject in 1973. Since then, there have been a number of studies dealing with the effects of anxiety on language learning, and these are reviewed below.

Before examining the studies that are directly related to anxiety and language learning, it is useful to delineate three perspectives from which anxiety has been investigated in a number of different areas, including the language learning context. The first perspective considers anxiety as a general personality trait that is relevant across several situations. A second perspective is interested in the here-and-now experience of anxiety as an emotional state. The third approach examines the specific forms of anxiety that occur consistently over time within a given situation. These will be referred to as the trait, state, and situation specific viewpoints, respectively. Differences in the conceptualization of anxiety may have influenced the results of some investigations of the role of anxiety in language learning. Until recently, the trait and state approaches were more commonly taken; however, their inability to capture the essence of foreign language anxiety or to satisfactorily demonstrate a role for anxiety in the language learning process seems to be leading research toward the situation specific perspective.

PERSPECTIVES IN ANXIETY RESEARCH

TRAIT ANXIETY

Trait anxiety may be defined as an individual’s likelihood of becoming anxious in any situation (Spielberger, 1983). A person with high trait anxiety would be highly likely to become apprehensive in a number of different situations. Trait anxiety has been shown to impair cognitive functioning, to disrupt memory, to lead to avoidance behaviors, and to have several other effects (Eysenck, 1979).

The literature related to this view of anxiety is considerable. Since the publication of the Taylor Manifest Anxiety Scale in 1953 and Spielberger and associates’ State-Trait Anxiety Inventory (STAI) in 1970, the literature has exploded with studies employing a measure of trait anxiety (Levitt, 1980;
Spielberger, 1983). Volumes of anxiety research have demonstrated the pervasive influence that anxiety can have on cognitive, affective, and behavioral functioning.

Whereas the trait anxiety perspective has been productive in describing the effects of generalized anxiety, applicable across situations, the approach has its critics. Authors such as Mischel and Peake (1982), Endler (1980), and others have argued that traits are meaningless unless they are considered in interaction with situations. Behavior occurs with a person in context. In essence, the trait anxiety approach requires people to consider their reactions over a number of situations. For most individuals, some situations will provoke anxiety whereas others will promote feelings of relaxation. Within a large group of people, the situations provoking anxiety will differ, even among individuals showing similar trait anxiety scores. The moderate correlations of trait anxiety and measures of performance (Spielberger, 1983) might be attributed to a form of averaging over these reactions.

Figure 1 demonstrates this point. It characterizes two individuals in a language class, both of whom have a total score of 21 on a fictitious trait anxiety scale. This scale has four subscales referring to anxiety experienced in social situations, during written tests or exams, in novel situations, and in dangerous circumstances. The situational elements comprising that score, however, differ dramatically. Person 1 feels very anxious in social situations but actually enjoys the challenge of written exams. Person 2, on the other hand, experiences considerable test anxiety but is at ease in social groups. Both have similar levels of anxiety in novel and dangerous situations. The consequences of these patterns of anxiety for each of these individuals would be expected to differ. Suppose that both individuals are enrolled in a foreign language course. Person 1 might do well if the course does not require classroom participation or presentations. Person 2, on the other hand, might achieve higher marks on oral exams than on written ones. From a trait perspective, however, this distinction is lost

Figure 1. Components of trait anxiety on a fictional scale
because the trait anxiety score is equal (i.e., 21) for both persons. Correlations between trait anxiety and marks in these classes likely would be increased if the more clearly delimited subscales were considered.

STATE ANXIETY

State anxiety is a blend of the trait and situational approaches. State anxiety is apprehension experienced at a particular moment in time, for example, prior to taking examinations (Spielberger, 1983). Thus, individuals who are prone to experience anxiety in general (i.e., who have high levels of trait anxiety) show greater elevations of state anxiety in stressful situations. The moderately strong correlation (approximately $r=.60$, Spielberger, 1983) usually found between state and trait anxiety suggests that increased levels of trait anxiety are associated with higher state anxiety.

State anxiety scales may be criticized for skirting the issue of the source of the reported anxiety. Instead of asking, “Did this situation make you nervous?” they ask, “Are you nervous now?” A myriad of factors can contribute to a respondent’s reaction to such a statement. In general, it is assumed that the situation contributing most to the response is the one under experimental consideration, but this is an assumption. With state anxiety assessment, the subject is not asked to attribute the experience to any particular source.

SITUATION SPECIFIC ANXIETIES

As an alternative to the state anxiety concept, several researchers have adopted the situation specific approach to the study of anxiety. Situation specific constructs can be seen as trait anxiety measures limited to a given context. Respondents are tested for their anxiety reactions in a well-defined situation such as public speaking, writing examinations, performing math, or participating in French class. This perspective is more diverse than are the previous two and the particular areas of concentration seem to proceed relatively independently.

An advantage of this approach is in clearly delineating the situation of interest for the respondent. By doing so, the assumptions about the source of the anxiety reaction can be avoided. This perspective also allows for the assessment of orthogonal types of anxiety. For example, one study has found a zero correlation between a measure of French Class Anxiety and Math Class Anxiety (MacIntyre, 1988).

Situation specific studies can offer more to the understanding of anxiety because the respondents are queried about various aspects of the situation. A key difference is that respondents are required to make attributions of anxiety to particular sources. For example, Horwitz, Horwitz, and Cope (1986) asked language students about anxiety related to such things as exams in language courses, speaking in language class, and the evaluations of them that other students are perceived to make. By testing more detailed hypotheses, the process by which a given situation generates anxiety can be examined. This may be done through item content analysis of brief scales (such as Gardner’s, 1985, French Use Anxiety scale) and factor analysis of larger scales (such as Horwitz et al.’s, 1986, Foreign Language Classroom Anxiety Scale), which can further refine theoretical models and generate testable hypotheses.

A criticism of this approach is that the situation under consideration can be defined very broadly (e.g., shyness), more narrowly (e.g., communication apprehension), or quite specifically (e.g., stage fright). It is the researcher’s responsibility to define a situation that is sufficiently specific to be meaningful for the purpose at hand, yet to have reasonable generality to permit generalizations. This issue is by no means unique to the language area and several very interesting discussions of this and related issues are available.1

This brief description of the three research traditions serves to classify articles in the literature of foreign language
anxiety. Some have taken a trait anxiety approach, some are concerned with state anxiety, and others employ situation specific measures. It seems plausible to suggest that the more meaningful and consistent results have emerged from the latter group.

MEASURING ANXIETY

There are a host of scales available for measuring trait, state, and situation specific anxieties (MacIntyre & Gardner, 1988a). The following is a brief description of the more prominent scales within each research tradition. Trait and state anxiety scales will be grouped together for better contrast with the situation specific measures.

TRAIT AND STATE ANXIETY SCALES

Currently, the most widely used scale for the measurement of both trait and state anxiety is the STAI, the State-Trait Anxiety Inventory (Spielberger, 1983). The inventory is used extensively in a variety of contexts with meaningful results. The psychometric properties of the scales are also quite good with alpha reliability coefficients consistently above .90 and validity coefficients that approach scale reliabilities (Spielberger, 1983). With Form Y, both the trait and state scales have 20 items, 10 keyed positively for anxiety and 10 negatively.

Another commonly-used trait anxiety scale was developed by Taylor (1953) using items from the MMPI personality test. The Manifest Anxiety Scale (MAS), was the first anxiety questionnaire to be used extensively and opened the door for research in the area (Levitt, 1980). The psychometric properties of the MAS are not as good as those for the STAI and it contains considerably more items, increasing the time needed for its administration. For these reasons, it has been supplanted by the STAI as the trait anxiety measure of choice.

These two very popular scales have been augmented by several other measures such as anxiety scales in personality tests (e.g., Heist & Yonge, 1968; Jackson, 1978), the IPAT scale (Cattell & Scheier, 1963), the S-R Inventory (Endler, Edwards, Vitelli, & Parker, 1988), and Zuckerman’s measures (1960, 1977). Other measures are available; however, none are used as extensively as is the STAI.

SITUATION SPECIFIC SCALES OF FOREIGN LANGUAGE ANXIETY

A number of studies have incorporated a scale intended specifically to assess foreign language anxiety. The studies conducted to date using these situation specific scales have shown promising results that appear to provide more informative and consistent conclusions than do those studies using trait or state types of measures. Whereas the various studies employ measures with different names, conceptually, they are quite similar.

The French Class Anxiety scale, originally included in a study by Gardner and Smythe (1975), appears to have been the first measure of anxiety concerned specifically with second language learning. It was followed by the development of scales tapping English Use Anxiety (Clément, Gardner, & Smythe, 1977) and English Test Anxiety (Clément, Gardner, & Smythe, 1980). The English Use Anxiety scale has been adapted for other languages, including French (Gardner, Smythe, & Clément, 1979) and Spanish (Muchnick & Wolfe, 1982). The majority of studies to be considered below have used these scales.

More recently, Horwitz et al. (1986) have developed a 33-item measure, the Foreign Language Classroom Anxiety Scale (FLCAS). The FLCAS is based on an analysis of potential sources of anxiety in language classrooms as advanced by Horwitz et al. (1986). In addition, Ely (1986) has provided measures of three attributes conceptually related to foreign
language anxiety. Finally, Clément (1987) has conducted studies of the role of self-confidence in language learning that include the lack of anxiety as an important component of self-confidence.

THE LITERATURE ON FOREIGN LANGUAGE ANXIETY

There is evidence that students experience a considerable amount of foreign language anxiety in their classes. In a study by Horwitz et al. (1986) 38% of subjects endorsed the item *I feel more tense and nervous in my language class than in my other classes.* In another study (MacIntyre & Gardner, 1989) French, Math, and English class anxieties were compared and the French class was rated as significantly more anxiety provoking than were the other two, which did not differ between themselves. Finally, Muchnick and Wolfe (1982) note that the attitude ratings of students of Spanish indicate “a fair amount of anxiety” (p. 277) among those tested. This suggests that language learning classes can be more anxiety provoking than are other courses.

The body of literature related to foreign language anxiety is fairly broad when studies including the various forms of anxiety are considered. The studies to be reviewed here have been grouped into three general classes. First, two studies involving children will be reviewed. Next, a section deals with the anxiety-related results of studies designed to test the causal models offered by Gardner and Clément and their associates. Finally, a group of studies have concentrated specifically on the role of anxiety in language learning.

STUDIES OF CHILDREN

The literature on the role of anxiety among children is fairly sparse. The conclusions drawn from the few studies that have been done on preadolescents seem to show that foreign language anxiety is more relevant to language learning among adults.

In an exploratory study of Filipino children learning English, Tarampi, Lambert, and Tucker (1968) classified students as *good or poor* in English oral performance. Children were asked to write either on the topic *Why I like to recite in class* or the topic *Why I do not like to recite in class.* The choice of essay was taken as a measure of audience sensitivity and was significantly correlated with an audience sensitivity questionnaire. The study found no significant correlations between either measure of audience sensitivity and oral performance in English.

Swain and Burnaby (1976) examined the association between personality and language learning in young children. French immersion students were compared with students in the regular language course in Kindergarten, Grade 1, and Grade 2. In general, a lack of differences on a number of measures (including one assessing anxiousness) was reported between the immersion and regular students. The differences that were found could be attributed largely to selection factors that initially placed the students in one group or the other.

ANXIETY IN CAUSAL MODELS

A second group of studies share the characteristic of being based on causal models. Such models tend to be fairly elaborate and consider the simultaneous influence of several variables, including attitudes and motivations. A large number of studies have been conducted to test these models, and their results suggest that anxiety does play an important role in language learning. The models offered by Gardner (1985) and Clément (1987) both contain a construct related to anxiety. The studies performed by these authors and their associates will be discussed in terms of their anxiety-related results.
GARDNER'S MODEL

Gardner and associates have, over several years, used the Attitude/Motivation Test Battery (AMTB) in studies leading to the development of a socioeducational model of language acquisition (Gardner, 1985). Although the focus of this model has been on more general issues of attitudes and motivation, it may be useful to highlight the findings relevant to anxiety. The results of these studies have consistently shown that anxiety is one of the best predictors of success in the second language.

The role of anxiety in this theoretical framework has yet to be clarified because the role of anxiety has changed somewhat from study to study. For example, Gardner's (1983) model did not retain anxiety as a variable, whereas a model suggested by Lalonde and Gardner (1984) did. The most recent test of the model (Gardner & Lysynchuk, 1990) also contains anxiety as a latent variable but it was not considered to be a direct "cause" of achievement in the second language. It is possible that this is merely an artifact of having only one or two scales available to measure the latent variable, Situational Anxiety. Under such conditions, the latent variable may not be as stable as are other variables in the model in terms of its definition and function (McDonald, 1985). For this reason, the results pertaining to anxiety directly will be examined rather than the role of anxiety in the models per se.

One of the first studies relevant to the present topic was conducted by Gardner, Smythe, Clément, and Gliksmn (1970). These authors used the AMTB to test more than 1,000 students in Grades 7 through 11 across seven regions of Canada. All students were Anglophones learning French as a second language. The study demonstrated that French Class Anxiety played a greater role as the students progressed to higher grades. In Grade 11, anxiety in French class became one of the best predictors of language proficiency. A more detailed analysis of this data set (Gardner, Smythe, & Lalonde, 1984) compared the factor structure of the AMTB across the different regions and grade levels. The factors were found to replicate fairly consistently. French Class Anxiety was most often associated with a factor related to the self-perception of French competence and, less often, a French achievement factor. The authors conclude that when the opportunity to use the foreign language is present in the community, French Class Anxiety is negatively correlated with French proficiency.

Another early study (Tucker, Hamayan, & Genesee, 1976) examined foreign language anxiety in older children. Several personality and aptitude tests, along with the AMTB were administered to three groups of Anglophone students learning French in Grade 7: Early Immersion, Late Immersion, and an English control group. A factor analysis revealed a dimension that was defined by measures of French Classroom Anxiety, Ethnocentrism, and Cognitive Style. This factor was also shown to correlate with scores on a standardized written French test. In addition, it was suggested that being more adventuresome, less anxious, and more willing to use the foreign language was associated with achievement in the Late Immersion group. It was hypothesized that, as compared to the Early Immersion group, the limited formal training of students in the Late Immersion program made the "shy-adventuresome" dimension more salient.

Lalonde and Gardner (1984) asked Where does personality fit into the language learning process?. Previous researchers (e.g., Brown, 1973; Krashen, 1981) had suggested that personality traits might be associated with language learning to some extent. However, Lalonde and Gardner's review of the literature suggested that personality variables tend not to produce the same results from one language study to the next. In their study, Lalonde and Gardner (1984) tested university students and found surprisingly few correlations of personality traits with language aptitude, French achievement, or self-rated French proficiency. A measure of trait anxiety did not correlate with any of the linguistic proficiency measures nor with the
AMTB composite indices of integrativeness, motivation, or attitude toward the learning situation.

Lalonde and Gardner (1984) also investigated a causal model, including the relevant personality traits and scales from the AMTB. French Class Anxiety was the only situation specific anxiety scale to be incorporated. The final model postulates that motivation (which was seen as having several causes itself) leads to French class anxiety. This anxiety produces changes in the self-perception of proficiency. Both anxiety and perceived proficiency are hypothesized to lead to changes in actual performance.

Gardner, Lalonde, and Moorcroft (1985) assessed the multitrait-multimethod validity (Campbell & Fiske, 1959) of the AMTB. The battery in general, and the French Use Anxiety scale in particular, showed both convergent and discriminant validity, and there was no evidence of confounding from social desirability. These authors (Gardner et al., 1985) also report on an experimental analogue learning task, but the results are given in terms of a total score for the battery rather than for the individual scales, such as anxiety. Thus, no results pertaining specifically to the effect of French Use Anxiety on the analogue task were available. A further study by Gardner and MacIntyre (in press) used a similar paradigm and does not report correlations between the various subtests of the AMTB and learning. They found that French Use Anxiety correlated significantly and negatively with learning on the first three trials, but not over the last three trials. The previous two studies focused on the production of French vocabulary. One other study also used a paired associates learning task but examined the recognition of the learned items. In that study, MacIntyre and Gardner (1989) found that both French Class and French Use Anxiety were significantly negatively correlated with learning.

To examine second language loss over the summer break from high school, Gardner, Lalonde, Moorcroft, and Evers (1987) tested students of French at the end of Grade 12 and again at the beginning of Grade 13. French Class Anxiety was significantly correlated ($r$ were negative and $p < .01$) with each of the four proficiency measures (word production, theme test, listening comprehension, and self-ratings of proficiency) for both the Grade 12 and Grade 13 testings. In fact, in seven of these eight cases, the highest correlations of AMTB scales with French production involved the anxiety scale. It was also reported that levels of French class anxiety did not differ significantly between the students who chose to continue into Grade 13 French and those who chose to drop out.

Trylong (1987) investigated the relationships of student aptitude, attitudes, and anxiety with achievement on written tests, oral quizzes, and final marks in a first year university French course. Anxiety was negatively correlated with achievement whereas favorable attitudes were positively related to achievement. In addition, there was a negative relationship between anxiety and attitudes, such that anxious students tended to have less-positive attitudes. Finally, a regression analysis found that the inclusion of anxiety contributed significantly to achievement, independent of aptitude and attitudes. Trylong concluded that aptitude, attitudes, and anxiety provide a useful combination of effects for understanding the process of language learning.

**CLÉMENTS MODEL**

A similar tack is taken by Clément and his associates in studies performed among Canadian Francophones learning English (Clément, Major, Gardner, & Smythe, 1977; Clément et al., 1977; 1980; Clément & Kruidenier, 1985, Labrie & Clément, 1986; Clément, 1987). Whereas Gardner refers to French Class Anxiety, Clément uses a concept of self-confidence. A key characteristic of the self-confident language learner in Clément's model is a lack of anxiety. Although the results are similar to those found for English speakers learning French discussed in the previous section, the model proposed to explain the effect differs somewhat.

In Clément's model, self-confidence among Francophone
students results from positive contact with English speakers, which is prompted itself by the desire to interact with English persons. Clément (1980, 1987) suggests that, in bicultural or multicultural settings, self-confidence will be a secondary motivation arising from the quality and frequency of interaction with the second language group. The types of interaction that the student experiences can be influenced by attitudes toward the maintenance of cultural vitality (Labrie & Clément, 1986; Clément, 1987). Self-confidence leads to a motivation to use the language that, through linguistic and especially nonlinguistic factors, predicts language achievement. This aspect of the model is not necessarily unidirectional, as self-confidence can both result from and lead to motivation for interaction with English speakers and to more positive interactions. The studies that support this model generally assess self-confidence by a group of measures that combine anxiety and self-ratings of second language proficiency.

Clément et al. (1977) examined the role of attitudes and motivation among Grade 7 and Grade 8 Francophone students learning English. They describe a Self-Confidence with English factor that was defined by positive teacher ratings, positive course evaluation, use of English outside the classroom, and a lack of both English class anxiety and English use anxiety. This study also examined the context in which English was acquired. It was reported that those who learn English in school experience more English use anxiety than do those who learn it at home or with friends. Further, English class anxiety was higher for those who learn English in either school or the home as compared with those who learn it from friends. Thus, Clément et al. (1977) suggest that more formal learning situations seem to lead to greater anxiety levels.

In a similar study, Clément et al. (1977) tested Grade 10 and Grade 11 Francophone students learning English. Again a Self-Confidence with English factor emerged. In addition to being defined by a lack of anxiety (both English class and English use), this factor received high positive loadings from measures of the desire to learn English, the tendency to speak more than one language at home, and both subjective (self-ratings) and objective measures of proficiency. This study shows that actual proficiency is positively related to perceived proficiency and negatively related to foreign language anxiety.

A follow-up study by Clément et al. (1980) also found a Self-Confidence with English factor. Similar to the factor described above, this one was defined by a lack of anxiety in English class, on tests, and in public, and positive self-rated proficiency in English, as well as actual proficiency in English. The authors further hypothesized that Self-Confidence with English is more important for Francophones learning English than vice versa because of a perceived threat to French ethnic identity. For Anglophones, learning French is a chance to add a new dimension to their culture without losing or risking being assimilated into the French culture. For Francophones, living in a predominantly English-speaking country (Canada), the acquisition of English might be seen as a threat to the continued vitality of the French culture. This process has been labelled "subtractive bilingualism" (Lambert, 1977). On the other hand, those who feel that learning English does not detract from a feeling of satisfaction with their French heritage should be more highly motivated to interact with English speakers, from which self-confidence can develop.

Clément and Kruidenier (1985) examined Clément's model using causal modelling techniques. They tested 1,180 Francophone students in Grades 7, 9, and 11 in a cultural milieu that was described as being mid-way between unilingual (French) and bilingual (French and English). Within such a context, self-confidence is assumed to be an important link in the motivational chain. The results supported Clément's model at all three grade levels. In this study, self-confidence was defined by a separate scale of self-confidence, lack of English class and English use anxiety, and positive self-ratings of English reading, writing, speaking, and comprehension ability. The authors concluded that self-confidence plays a role as a form of motivation.
In Clément's model of second language acquisition, primary motivation is determined by the interplay of integrativeness (affective reactions toward the majority group) and fear of assimilation into the majority group. Together with pleasantness and frequency of contact with the majority group, these determine a secondary motive of self-confidence with the second language. Labrie and Clément (1986) tested the hypothesis that ethnolinguistic vitality determines both components of primary motivation among Grade 9 Francophone students in a community of 40% French and 60% English speakers. The expected role of subjective ethnolinguistic vitality was not supported; however, the results pertaining to self-confidence are interesting. Relative self-confidence was defined as the difference between self-confidence with French and self-confidence with English. Thus, more positive scores indicate greater self-confidence with the second language (English). It was found that pleasant contact produced increased relative self-confidence when frequency of contact was low. When frequency of contact was high, the pleasantness of contact was less influential in determining relative self-confidence. It was also found that relative self-confidence was more highly correlated with motivation to use English than with motivation to learn English.

To test the generality of Clément's suggestion that self-confidence is important among minority group members, Pak, Dion and Dion (1985) tested Chinese university students living in metropolitan Toronto, where they represent a minority group. It should be noted that the definition of "self-confidence" in this study differs from Clément's in that self-ratings of second language proficiency were the only measure of self-confidence, the anxiety component was omitted. Five factors were extracted, two of which had substantial loadings from self-confidence. One factor, Linguistic Assimilation, was defined positively by self-confidence with English, a lack of self-confidence with Chinese, and several measures of involvement with Canadian culture such as length of stay and citizenship status. The other factor, labelled Self-Confidence, was defined by self-confidence with English, self-esteem, a sense of control, and satisfaction with life in Toronto. Pak et al. conclude that these Chinese students showed linguistic rather than cultural assimilation. Being a visible minority, cultural assimilation is more difficult because they are easily identified as being of Chinese ancestry. For this reason, Chinese students can focus on learning English without jeopardizing their sense of ethnic identity.

SUMMARY

The conclusions drawn from several of the studies that have employed causal modelling are quite consistent. Covering several measures of proficiency, in several different samples, and even in somewhat different conceptual frameworks, it has been shown that anxiety negatively effects performance in the second language. In several cases, anxiety provides some of the highest simple correlations of attitudes with achievement.

ANXIETY STUDIES

The majority of studies reviewed to this point have been based on the models of Gardner and Clément, rather than on a specific model focused on anxiety. The final set of studies to be discussed are more clearly focused on anxiety and language learning among older students and adult language learners. Several methodological approaches have been taken by this group of researchers, and a variety of target languages have been studied. Some of the studies included in this group have used constructs similar to, but not labelled as, anxiety, such as introversion and language class discomfort.

Whereas studies in the previous section were well grounded in theory and supported by results pertaining to the causal models, problems with definition and measurement have lead to a somewhat weak theoretical foundation for the literature.
focused directly on foreign language anxiety. In reviews by both Brown (1973) and Scovel (1978), these problems were identified. Scovel proposed a system based on Buddhist philosophy that, although interesting, did not receive support in terms of research activity. In presenting their recent theory, Horwitz et al. (1986) state that researchers have “neither adequately defined foreign language anxiety nor described its specific effects on foreign language learning” (p.125). Horwitz et al. propose that foreign language anxiety be seen as a separate and distinct process particular to second language acquisition. Their theory is largely based on clinical experience and anecdotal reports, although validating evidence is accumulating.

Horwitz et al. (1986) cite listening and speaking as the main sources of anxiety. Unprepared, free speech is especially disconcerting. Sound and linguistic structure discrimination present problems over and above the other potential comprehension difficulties. Problems observed by Horwitz et al. include poor retrieval of items from memory under anxious conditions (such as exams), overstudying as a compensation, avoidance of the situation as in learned helplessness, and a fear of making mistakes that leads to silence instead of participation. All of these reactions are consistent with the general literature on anxiety (Eysenck, 1979) and represent some of the anticipated behaviors of anxious individuals in this context (Spolsky, 1989).

Three interrelated processes underlie the theory. First, a form of communication apprehension operates that is specific to second language contexts. The unique component of this apprehension is the metacognitive awareness that, as a speaker and a listener, full comprehension of foreign language messages is not possible. Therefore, the potential for frustrated or aborted communication is always present. Such frustration may even be considered part of the learning process. This communication apprehension may or may not be associated with the speech anxiety experienced in first language contexts (Lucas, 1984).

The second aspect involves worry over the frequent testing and examinations in a language classroom. Horwitz et al. (1986) are not clear whether this test anxiety is specific to the type of tests encountered in language class or whether it is a generalized test anxiety such as measured by the Test Anxiety Scale (Sarason, 1986). Foreign language tests, given orally, likely evoke test anxiety as well as communication apprehension.

Fear of negative evaluation is the third process and is more broadly based than are the previous two. Evaluation, in this case, refers to both the academic and personal evaluations made of students on the basis of their performance and competence in the target language. Teachers and peers alike listen to each utterance to “correct” mistakes. Adults, especially, can experience apprehension because they cannot present themselves in the new language as fully as they can in their native language. The intimate relationship between self-concept and self-expression (see Schlenker & Leary, 1985) makes foreign language anxiety distinct from other academic anxieties, such as math anxiety (Tobias, 1978).

Evidence in support of this theory has been reported by Horwitz (1986). Significant correlations were obtained between the Foreign Language Class Anxiety Scale and scales of test anxiety, fear of negative evaluation, communication apprehension, and trait anxiety (Spielberger, 1983). In addition, a single Guilford-style validity item, Rate your anxiety level concerning foreign language class, was highly associated with FLCAS scores \( r(106)=.77, p<.001 \). Significant correlations (approximately \( r_s=.50 \)) have been found with expected and actual final grades in language courses. Although FLAS scores were correlated with test anxiety, only the FLAS was found to be correlated with course marks.

The literature on foreign language anxiety generally supports the tenets advanced by Horwitz et al. (1986), although most studies were not explicit tests of that theory. The components receiving the strongest support seem to be those that are related to the social evaluative and communicative aspects of
the theory. Test anxiety may be less important, although a rigorous investigation has yet to be made.

Chastain (1975) examined the relationships among several variables, including test anxiety, trait anxiety (Taylor, 1953), reserved versus outgoing personality, and creativity. German, Spanish and French course marks served as the criterion to be predicted. The results of this study are inconsistent and difficult to interpret. Test anxiety was significantly positively correlated with marks in Spanish, marginally positively related to marks in German, negatively correlated with marks in audiolingual French and not related to marks in regular French. Also, both SAT verbal scores and the degree of previous language study showed nonsignificant correlations with marks in regular French and marks in audiolingual French, however, the correlations were positive in sign for the regular French and negative in sign for audiolingual French. Trait anxiety was not related to marks in any of the courses.

Studies of the effects of anxiety on specific language learning processes have shown particularly interesting results (Scovel, 1978). One of the first was undertaken by Kleinmann (1977) who studied Spanish/Portuguese and Arabic ESL students. Based on an analysis of the features of their native languages, Arabic students were expected to avoid the passive tense whereas Spanish/Portuguese students were expected to use the passive tense. Kleinmann found that facilitating test anxiety (i.e., anxiety considered as helpful) was negatively related to the avoidance of certain linguistic structures. The results are not completely consistent, in that debilitating test anxiety—the usual implication of anxiety—did not correlate negatively with avoidance behavior. In both cases when the expected differences occurred, facilitating anxiety correlated positively with the use of difficult structures whereas debilitating anxiety showed no correlation. No explanation is offered for the null results of debilitating anxiety.

Steinberg and Horwitz (1986) argue that global measures of language ability such as course marks or skills tests may be less sensitive to the subtle effects of anxiety than are more specific dependent measures. They examined the effect of induced anxiety on the ratio of denotive and interpretive story content. Twenty Spanish ESL students were tested. The 10 students in the anxiety arousal group were treated in an aloof manner by the experimenter and their session was videotaped to increase the tension level. The other group was treated warmly, engaged in small talk with the experimenter, and were not videotaped. Using the foreign language, subjects were asked to describe three features of a group of ambiguous scenes: (1) the elements of the picture, (2) the actual event depicted (denotive content), and (3) their view of what was happening in the scene (interpretive content). The ratio of denotive and interpretive content was taken as the dependent measure. Although the sample size was small, the anxiety arousal group was found to be significantly less interpretive than was the more relaxed group. This suggests a reluctance on the part of anxious students to express personally relevant information in a foreign language conversation.

Young (1986) examined the effect of anxiety on the oral proficiency ratings of prospective language teachers. The concern underlying this study was that anxiety would reduce scores on the Oral Proficiency Interview, a proposed test of qualification to be taken before certification as a language teacher in Texas. Self-ratings of proficiency as well as a dictation test were taken in addition to a practice interview. Four measures of anxiety were examined: (1) Spielberger's (1983) State Anxiety Scale, (2) the Cognitive Interference Questionnaire (Sarason, 1980), (3) a self-report of anxiety, and (4) items from the Horwitz et al. (1986) FICAS scale. Both the self-ratings of proficiency and the dictation tests were significantly correlated with oral proficiency interview scores. In addition, three of the four anxiety scales (with the exception of the Cognitive Interference Questionnaire), correlated significantly \( (p<.01) \) with oral proficiency. Young also reports nonsignificant partial correlations between the anxiety scales
and the oral proficiency interview scores after statistically removing the effects of the other proficiency measures. From this, the author concludes that ability is the major factor influencing the oral proficiency interview scores and that, after controlling for ability, anxiety has little effect. This hypothesis deserves consideration; however, this particular analysis ignores the difficulty of interpreting the residualized scores used in partial correlation (cf. Winne, 1983). Inasmuch as the control variables in this case are conceptually very similar to the criterion (they are both measures of proficiency), such a conclusion may not be warranted.

Gardner, Moorcroft, and MacIntyre (1987) investigated the effect of French class, French use, interpersonal, trait/state (Spielberger, 1983), and test anxiety on two oral production measures. To control for ability in this study, the number of years that the subject had been studying French were partialled out of the anxiety-proficiency correlations. The results showed that only French class anxiety, French use anxiety, and two measures of interpersonal anxiety were correlated with scores on the word production task. None of the correlations between anxiety and scores for free speech quality were significant. In discussing the results, Gardner et al. (1987) note that only the types of anxiety related to elements of the experimental situation, interpersonal and French, correlated with the word production measures. The authors further hypothesize that students could structure the free speech according to their level of expertise, thereby coping with the anxiety that the task might arouse. The word production task, which required naming appropriate elements of a category, could not be adjusted to the student's level of proficiency.

MacIntyre and Gardner (1989) have extended the previous study by examining the learning and production of vocabulary items. Measures of nine different types of anxiety were factor analyzed yielding two independent anxiety factors. The first was labelled General Anxiety based on substantial loadings from trait, state, test, math, and computer anxieties. The second factor was labelled Communicative Anxiety and was defined by French class, French use, English class, and audience anxiety. Dependent measures included the learning of French-English paired associates and measures of short-term and long-term vocabulary recall. Long-term recall was given in both oral and written forms. Results for all measures of vocabulary showed that, using median splits, subjects high in Communicative Anxiety learned and recalled fewer vocabulary items than did those low in Communicative Anxiety. No differences were found between the high and low General Anxiety groups on any of the measures. Analyses of covariance revealed that these effects were unaltered after each of three indices of prior ability (i.e., years of study, marks, and performance in the first trial of the learning task) were partialled out (MacIntyre & Gardner, 1988b).

The results pertaining to the individual correlations showed similar effects. French Class Anxiety and French Use Anxiety correlated significantly with scores on the learning trials, oral production, and written production. French Use Anxiety correlated with short-term recall of the vocabulary pairs. State anxiety also showed significant correlations with some of the learning measures. Cross-lagged panel correlation analyses found that this effect could be attributed to a sequence of poor performance raising anxiety levels rather than to increased anxiety inhibiting performance.

Both this study and Young's (1986) study raise the question of causality. In short, does anxiety interfere with pre-existing ability and therefore impair performance? Or does poor performance, based solely on ability, lead to anxiety as merely an effect? These questions have been asked many times before and the most satisfactory solution seems to be a model of reciprocal causation (Levitt, 1980). A unidirectional model, as suggested by such questions, may be far too simple to account for the complete process. To the extent that anxiety is a cause rather than an effect, the interest of researchers and educators would likely be focused on the path from anxiety to achieve-
ment. To test this, reducing anxiety should lead to better scores on measures of second language performance and achievement. If anxiety is merely an effect, its reduction should have little influence on a student’s proficiency.

MacIntyre and Gardner (1989) have suggested the following model that might be applied to the development and maintenance of foreign language anxiety. At the earliest stages of language learning, motivation and language aptitude are the dominant factors in determining success. During the first few experiences in the foreign language, anxiety plays a negligible role in proficiency because, even if anxiety is present, it is not the foreign language anxiety that has been discussed to this point. Anxiety experienced at this time would be based on trait anxiety, test anxiety, communication apprehension, novelty anxiety, etc. that are not necessarily specific to the language learning situation. Anxiety aroused in this context, as a result of early language experience, would best be called state anxiety. After several experiences with the second language context, the student forms attitudes that are specific to the situation, that is, emotions and attitudes about learning a new language. If these experiences are negative, foreign language anxiety may begin to develop. As negative experiences persist, foreign language anxiety may become a regular occurrence and the student begins to expect to be nervous and to perform poorly. Thus, foreign language anxiety is based on negative expectations that lead to worry and emotionality. This leads to cognitive interference from self-derogatory cognition that produces performance deficits. Poor performance and negative emotional reactions reinforce the expectations of anxiety and failure, further anxiety being a reaction to this perceived threat.

Indirect support for this model comes from several sources although a direct test has not yet been attempted. A study by Gardner, Smythe, & Brunet (1977) examined 62 English-speaking students learning French in an intensive summer school environment. Students were grouped into beginners, intermediate, and advanced levels and completed scales of the AMTB before and after the course. The pattern of French Class Anxiety scores is quite clear, with beginners experiencing the most anxiety and advanced students the least, and with intermediate students falling between the other two. All three groups showed similar declines in the levels of French Class Anxiety from the beginning to the end of the course. The results indicate that as experience and proficiency increase, anxiety declines in a fairly consistent manner. Results with similar implications were obtained by Desrochers and Gardner (1981), who investigated Anglophone Grade 8 students on a four-day trip to a French-speaking community. Overall, the students who participated returned with more favorable attitudes than did those who did not take the trip. In particular, anxiety was found to be significantly lower among the excursion students. Also, Gardner et al. (1979) tested a group of Canadian and American adult students of French and found that French proficiency increased whereas French Class Anxiety and French Use Anxiety were significantly lower after an intensive French summer school program. Finally, Chapelle and Roberts (1986) tested students of English as a second language. They found that the correlation between English Class Anxiety and TOEFL scores at the beginning of a semester was not significant; however, by the end of the semester a significant correlation was found.

These four studies suggest that favorable experiences and increased achievement reduce anxiety. Also, the studies were conducted in more intensive environments than regular language classrooms. Students were likely forced to cope with their anxiety and the model would suggest that gains in proficiency resulted in students having reduced levels of foreign language anxiety.

SUMMARY

The theory proposed by Horwitz et al. (1986) divides foreign language anxiety into three components: communica-
tion apprehension, test anxiety, and fear of negative evaluation. Studies of foreign language anxiety tend to support the theory of Horwitz et al. (1986) and show that anxiety influences language learning and production. MacIntyre and Gardner's (1989) model is concerned with the development of this anxiety and the process by which it becomes differentiated from other types of anxiety. This model has not yet been tested directly, however, tangential evidence tends to support it. Further research is required to further refine both theories, but their presence suggests that foreign language anxiety is a developing field of inquiry.

CONCLUSIONS

The future of research in the area is promising with the development of a theoretical base for generating testable hypotheses and sound instruments to measure the constructs. Studies of foreign language anxiety consistently show that such anxiety can impair language learning and production. Also, the anxious student may be characterized as an individual who perceives the second language as an uncomfortable experience, who withdraws from voluntary participation, who feels social pressures not to make mistakes, and who is less willing to try uncertain or novel linguistic forms.

It has been argued above that a situational perspective provides the best research approach. The results of the studies reviewed here show that foreign language anxiety can be distinguished from other types of anxiety and that it can have a negative effect on the language learning process. Whereas trait anxiety has not proved to be useful in predicting achievement in a second language, the findings based on that construct are still relevant to the language area. The body of literature related to anxiety in general contains several methodological and empirical considerations that, when properly applied, would be beneficial to the study of foreign language anxiety.

Future research can proceed to clarify the theories that have been advanced. Some of the areas that might be investigated include the relation between communication apprehension in the first and second languages, the relationships among the various scales of foreign language anxiety, the relationship of test anxiety to foreign language anxiety, the differences in foreign language anxiety among majority and minority language groups, research into reducing the effects of anxiety, and so on. The knowledge gained from such studies has the potential to significantly improve the language learning experience among the many adult foreign language learners.

NOTES

1The debate between trait perspectives and situational perspectives is especially a key issue in the literature on personality assessment. For a discussion of the controversy, see Mischel and Peake (1982), Jackson and Paunonen (1985), Bem and Allen (1974), and Endler (1980).
2This scale is a minor revision of one published earlier by Spielberger, Gorsuch, & Lushene (1970) that has been used extensively. For all practical purposes, the scales provide equivalent results.

REFERENCES


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