Annual Review of Applied Linguistics (2001) **21**, 112 126. Printed in the USA.
Copyright © 2001 Cambridge University Press 0267-1905/01 $9.50

7. LANGUAGE ANXIETY AND ACHIEVEMENT

Elaine K. Horwitz

This chapter considers the literature on language learning anxiety in an effort to clarify the relationship between anxiety and second language learning. It will first argue that language anxiety is a specific anxiety rather than a trait anxiety and discuss how this conceptualization has helped clarify the research literature. After Horwitz, Horwitz, and Cope (1986) proposed that a specific anxiety construct which they called Foreign Language Anxiety was responsible for students uncomfortable experiences in language classes and offered an instrument, the Foreign Language Classroom Anxiety Scale (FLCAS), to measure this anxiety, findings concerning anxiety and language achievement have been relatively uniform, indicating a consistent moderate negative relationship between anxiety and achievement. However, some researchers (Sparks and Ganschow and their colleagues) have suggested that poor language learning is a cause rather than a result of language anxiety. This review concludes that anxiety is indeed a cause of poor language learning in some individuals and discusses possible sources of this anxiety, including difficulty in authentic self-presentation and various language teaching practices. In addition, it reports on new trends in language anxiety research that attempt to identify aspects of language learning (e.g., reading anxiety or writing anxiety) which provoke anxiety for some individuals.

Researchers, language teachers, and even language learners themselves have been interested in the possibility that anxiety inhibits language learning for quite some time. Clinical experience, empirical findings, and personal reports all attest to the existence of anxiety reactions with respect to language learning in some individuals; however, the research history in this area has not been straightforward. This chapter considers the literature on language learning anxiety in an effort to clarify the relationship between anxiety and achievement in second language learning.

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

Anxiety as Psychological Construct

Anxiety is the subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the autonomic nervous system, (Spielberger, 1983, p. 1). Not only is it intuitive to many people that anxiety negatively influences language learning, it is logical because anxiety has been found to interfere with many types of learning and has been one of the most highly examined variables in all of psychology and education. Psychologists distinguish several categories of anxiety. Typically, anxiety as a personality trait is differentiated from a transient anxiety state. In other words, trait anxiety is conceptualized as a relatively stable personality characteristic while state anxiety is seen as a response to a particular anxiety-provoking stimulus such as an important test (Spielberger, 1983). More recently the term situation-specific anxiety has been used to emphasize the persistent and multi-faceted nature of some anxieties (MacIntyre & Gardner, 1991a). Public speaking anxiety is generally viewed to be in this category, and this chapter will take the position that foreign language anxiety is as well.

Early Perspectives on Anxiety and Language Learning

Since the mid 1960s scholars have entertained the possibility that anxiety interferes with second language learning and performance; however, documentation of that relationship came much later. Interestingly, the relationship between anxiety and second language achievement the subject of this review is exactly the same issue that puzzled Scovel over two decades ago (Scovel, 1978). Scovel reviewed the then available literature on anxiety and language learning in an attempt to explain a truly conflicting set of findings. At the time there were studies which found the anticipated negative relationship between anxiety and second language achievement, but several studies found no relationship, and positive relationships between anxiety and second language achievement were also identified (Chastain, 1975; Kleinmann, 1977). In other words, contrary to the predictions of many language teachers, some studies found that learners with higher levels of anxiety actually showed higher achievement scores. Scovel posited a rational solution to this enigma. He argued that since the various studies used different anxiety measures such as test-anxiety, facilitating-debilitating anxiety, etc., they logically found different types of relationships between anxiety and language achievement. Scovel concluded that language researchers should be specific about the type of anxiety they are measuring and recommended that anxiety studies take note of the myriad of types of anxiety that had been identified.

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

Language Anxiety

Scovel s suggestions have proven to be good ones, and since that time researchers have been careful to specify the type of anxiety they are measuring. However, in 1986, Horwitz, Horwitz, and Cope took the literature a step further
by proposing that a situation-specific anxiety construct which they called Foreign Language Anxiety was responsible for students negative emotional reactions to language learning. According to Horwitz, Horwitz, and Cope, this anxiety stems from the inherent inauthenticity associated with immature second language communicative abilities:

> Adults typically perceive themselves as reasonably intelligent, socially-adept individuals, sensitive to different socio-cultural mores. These assumptions are rarely challenged when communicating in a native language as it is not usually difficult to understand others or to make oneself understood. However, the situation when learning a foreign language stands in marked contrast. As an individual s communication attempts will be evaluated according to uncertain or even unknown linguistic and socio-cultural standards, second language communication entails risk-taking and is necessarily problematic. Because complex and nonspontaneous mental operations are required in order to communicate at all, any performance in the L2 is likely to challenge an individual s self-concept as a competent communicator and lead to reticence, self-consciousness, fear, or even panic (p. 128).

They also offered an instrument, the Foreign Language Classroom Anxiety Scale (FLCAS), to measure this anxiety. Since that time, findings concerning anxiety and language achievement have been relatively uniform. Studies using the FLCAS and other specific measures of second language anxiety have found a consistent moderate negative correlation between the FLCAS and measures of second language achievement (typically final grades). Accordingly, this review will be limited to those studies which assume a specific anxiety reaction to language learning. In addition to the FLCAS, these measures include the French Class Anxiety Scale (Gardner & Smythe, 1975), The English Use Anxiety Scale (Clément, Gardner, & Smythe, 1977), the English Test Anxiety Scale (Clément, Gardner, & Smythe, 1980), the French Use Anxiety Scale (Gardner, Smythe, & Clément, 1979), and the Spanish Use Anxiety Scale (Muchnick & Wolfe, 1982).

The situation-specific anxiety in response to language learning proposed by Horwitz, Horwitz, and Cope has been found to be largely

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

independent of other types of anxiety. Horwitz (1986) found a low but significant correlation between the FLCAS and Spielberger s (1983) test of trait-anxiety ($r = .29$, $p = .002$). Slight positive, but nonsignificant, correlations were also found between the FLCAS and Fear of Negative Evaluation (Watson & Friend, 1969) and Communication Apprehension (McCroskey, 1970). In the case of test anxiety (Sarason, 1978), the correlation was moderate and significant ($r = .53$, $p = .001$). Even so, this correlation means that the two measures only share 28% of variance and are, therefore, reasonably independent. Also consistent with the construct of a situation-specific anxiety, MacIntyre and Gardner (1989) did not find a relationship between general anxiety and foreign language vocabulary learning.

Thus, with the development of distinct situation-specific measures of foreign language anxiety, the issue of appropriate anxiety measurement seemed to be resolved; however, the issue of appropriate outcome measures remained. Steinberg and Horwitz (1986) argued that the use of final grades as a measure of second language achievement was probably in and of itself a source of variability in the anxiety literature and urged researchers to use more subtle achievement measures to capture the true effects of anxiety. Indeed, this study found that ESL students attempted a greater number of elaborated and personal messages in English when experiencing an experimental condition intended to relax them than those learners experiencing a treatment designed to induce anxiety. Importantly, these differences in elaboration and number of personal utterances were observed even though the anxious and nonanxious students displayed equal levels of overall oral fluency.

Language Anxiety and Achievement

There have been a number of studies in a number of instructional contexts with varying target languages which find a negative relationship between specific measures of language anxiety and language achievement. In the first study using the FLCAS (Horwitz, 1986), there was a significant moderate negative correlation between foreign language anxiety and the grades students expected in their first semester language class as well as their actual final grades, indicating that students with higher levels of foreign language anxiety both expected and received lower grades than their less anxious counterparts. MacIntyre and Gardner (1989) also found significant negative correlations between a specific measure of language anxiety (French class anxiety) and performance on a vocabulary learning task.

With respect to a target language which is typically perceived as difficult by English-speakers, Aida (1994) found a significant negative correlation between FLCAS scores and final grades among American

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

second-year Japanese students. This finding was replicated by Saito and Samimy (1996) with Japanese learners at three levels (beginning, intermediate, and advanced). Similarly, in a study of Canadian university learners of French, Coulombe (2000) found a somewhat smaller (but significant) negative correlation between FLCAS scores and final grades in eleven French classes ranging from beginning to advanced. Thus, it appears that the observed negative relationship between anxiety and achievement holds at various instructional levels as well as with different target languages. However, it should also be noted that all the studies reviewed here included students at the college or university level and the relationship between anxiety and achievement in younger learners remains relatively unexplored (see, however, Sparks & Ganschow, 1996).

One study is particularly interesting because it focuses on more advanced language learners (pre-service teachers) in a non-North American context. Rodriguez (1995) found a significant negative correlation between FLCAS scores and final grades among Spanish-speaking EFL students in seven English classes in Venezuela. In this case the correlation ($r =$ .57) was somewhat higher than reported in the other studies, indicating that the two measures have almost one-third of the variance in common. Considering all the possible influences on final grades, this seems a very substantial correlation and raises the possibility that language anxiety is also an important issue among language teachers, as Horwitz (1996) argues.

Finally, in an Asian EFL context, Kim (1998) not only found significant negative relationships between FLCAS scores and final grades but also reported an interesting difference in the relationship when observed in a traditional reading- focused class and a conversation class. Specifically, students were considerably less anxious in the reading class than in the conversation class. Thus, this study appears to support teachers and students intuitive feelings that language classrooms which require oral communication are more anxiety-provoking than traditional classrooms.

Several studies have also noted a negative relationship between language anxiety and outcome measures other than final grades. Trylong (1987) found a negative relationship between anxiety and teacher ratings of achievement; MacIntyre, Noels, and Clément (1997) observed a negative relationship between anxiety and students self-ratings of their language proficiency. Gardner and MacIntyre (1993) present perhaps the most extensive set of findings with respect to language anxiety. Using measures of both classroom anxiety and language use anxiety, they found significant negative correlations with several language production measures including a cloze test, a composition task, and an objective French proficiency measure. Interestingly, they found somewhat higher

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

negative correlations between student anxiety scores and their self-ratings of French competence than with their actual performance on the tests of French ability. Finally, with respect to some of the nonlinguistic but hoped-for goals of language instruction, Spitalli (2000) found a negative relationship between FLCAS scores and a measure of attitudes toward people of different cultures in American high school language learners of French, Spanish, and German.

One final point about the achievement studies seems relevant; that is, levels of foreign language anxiety may vary in different cultural groups. While Horwitz (1986) and Aida (1994) found relatively similar means on the FLCAS for American foreign language learners, Truitt (1995) found relatively higher levels in Korean EFL learners, and Kunt (1997) found somewhat lower levels in Turkish and Turkish-Cypriot learners of English. It also seems, as reported above, that for American learners of foreign languages, at least, anxiety levels do not vary with respect to target language (Aida, 1994; Horwitz, 1986; Saito, Horwitz, & Garza, 1999).

Possible Confounding in the Achievement Studies

Whenever the statistical procedure of correlation is used, as it was in the achievement studies reviewed here, it is not possible to be sure of the direction of the correlation or to rule out the possibility that some uncontrolled variable is responsible for any relationship which has been observed between the two variables under study. In the case of anxiety, it seems especially important to consider that students who do poorly in language classes would naturally (and logically) become anxious. These concerns form the basis of a number of papers which seek to determine sources of foreign language anxiety. For example, Young (1986) found that a significant correlation between anxiety and performance on an oral examination in French and Spanish dissipated to a chance level when actual second language ability was controlled. She reminded readers, however, that the oral examination used in the study was only a practice one and that the participants were advanced language learners (pre-service teachers). She therefore speculated that these students were not experiencing sufficient levels of anxiety to inhibit their performance. In addition, she suggests that in the case of advanced learners such as these, anxiety would probably be a greater hindrance to their ability to perform than to their development of L2 proficiency. (See also Rodriguez, 1995, and Horwitz, 1996).

Contrary to Young s results, Phillips (1992) found a significant negative correlation between FLCAS scores and performance on an oral interview examination even when ability in the form of students written examination averages was statistically controlled. This study may be

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

more representative of the relationship between anxiety and oral performance in actual language classes than Young s because the students were participating in an oral interview for which they would receive a grade and were third-semester college French students rather than pre-service teachers.

There has also been a strand of research which has strongly questioned the existence of foreign language anxiety independent of language achievement. In a series of studies, Sparks and Ganschow and their colleagues (see for example, Ganschow, Sparks, Anderson, Javorsky, Skinner, & Patton, 1994; Sparks & Ganschow, 1991; Sparks & Ganschow, 1996, this volume) propose the Linguistic Coding Differences Hypotheses (LCDH) and offer a theoretical perspective for understanding relationships between foreign language anxiety and foreign language achievement: in their view, because

> FL (foreign language) learning is based primarily on one s native language learning ability (i.e., language aptitude), students anxiety about FL learning is likely to be a consequence of their FL learning difficulties, and students language learning ability is a confounding variable when studying the impact of affective differences (e.g., anxiety, motivation, attitude) on FL learning (Sparks, Ganschow, & Javorsky, 2000, p. 251).

Thus, Sparks and Ganschow pose a crucial question with respect to the study of foreign language anxiety and its relationship with achievement. Specifically, they ask if anxiety is a cause or result of poor achievement in language learning and propose subtle first language learning deficits as the primary cause of poor achievement. Language difficulties, they propose, are likely to be based in native language learning and that facility with one s language codes (phonological/ orthographic, syntactic, semantic) is likely to play an important causal role in learning a FL (p. 235). Indeed, Ganschow and Sparks (1991) found that less anxious language learners performed significantly better on oral and written foreign language measures as well as on the Modern Language Aptitude Test. (See also Sparks and Ganschow, this volume). It is easy to conceptualize foreign language anxiety as a result of poor language learning ability. A student does poorly in language learning and consequently feels anxious about his/her language class. Conversely, a student might do well in the class and feel very confident. The challenge is to determine the extent to which anxiety is a cause rather than a result of poor language learning.

MacIntyre (1995a, 1995b) and Horwitz (2000) have responded to the LCDH arguing for the existence of language anxiety independent of first or general language learning disabilities. Particularly, they insist that

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

anxiety is a well-known source of interference in all kinds of learning and wonder why the case of language learning should be different. In addition, the numbers of people who experience foreign language anxiety appear to be far greater than the incidence of decoding disabilities in the general population, and many successful language learners also experience language anxiety. Perhaps most importantly, they observe that language learning requires much more than sound-symbol correspondences and argue that the LCDH is ultimately based on an overly simplified view of language learning. From all these perspectives, it appears that language anxiety fits the general criterion for an anxiety which by definition is an unrealistic reaction to a particular situation. Anxious language learners feel uncomfortable with their abilities even if their objective abilities are good.

Anxiety under Different Instructional Conditions

Understandably, language teachers would like to know the sources of language anxiety so that classes may be organized in a manner which minimizes student anxiety reactions. Unfortunately, the answers are not clear-cut. Koch and Terrell (1991) found that even within Natural Approach classes a language teaching method specifically designed to reduce learners anxiety learners were more comfortable participating in some activities, such as pair-work and personalized discussions, than others. However, they also found great variability in learner reactions to the activities. In almost all cases, any task which was judged comfortable by some language learners was also judged stressful by others. On the other hand, Young (1990) found that American secondary language students generally preferred and felt more comfortable participating in oral activities in small groups rather than in front of the whole class.

When considering the issue of language anxiety and classroom practice, it is important to keep cultural differences in mind. In addition to the individual variation in student reactions that Koch and Terrell found, it is entirely possible that some practices perceived by one group of learners as comfortable may prove stressful for learners from a different cultural group who are used to different types of classroom organizations.

Fortunately, one study indicates that classroom atmosphere rather than specific instructional activities may decrease student anxiety levels. Palacios (1998) examined the impact of classroom climate on students levels of foreign language anxiety and found that several components of classroom climate were associated with higher (and lower) levels of anxiety. Most importantly, the level of perceived teacher support had the strongest relationship with students feelings of anxiety. According to the instrument used in the study, teacher support is defined as the help and

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

friendship the teacher shows toward students; how much the teacher talks openly with students, trusts them, and is interested in their ideas (Trickett & Moos, 1995). Thus, according to this finding, it may be possible to reduce the anxiety of language learners by offering them sincere support and interest. (This finding is very comforting to me because I believe that many language teachers will be pleased to extend these human qualities to their students to an even greater degree.) Palacios also found that classroom levels of affiliation among the learners, lack of competition, and clear task orientation were associated with lower anxiety levels.

The focus of instruction may also impact language anxiety. As reported earlier, Kim (1998) found that students in a conversation class experienced higher anxiety levels than students in a reading class. In addition, Saito, Horwitz, and Garza (1999) found that the students tended to experience lower levels of reading anxiety than general foreign language classroom anxiety. Thus, it appears that no matter what the classroom environment, language learners may experience some inherent levels of anxiety when participating in oral activities. However, Palacios findings imply that it may be possible to keep anxiety levels to a minimum with a supportive and constructive classroom environment.

Two studies of learner perceptions of anxiety also point to ways that teachers can make their students feel more comfortable. In a study of Turkish learners of English, Aydin (1999) found that students felt that their anxiety resulted from personal concerns such as negative self-assessment of language learning ability and high personal expectations as well as certain classroom practices like speaking in front of the class. Interestingly, like Palacios learners, these Turkish students identified their teacher s manner as an important source of anxiety. In addition, many of the American community college students in Donley s (1997) study reported being anxious about speaking Spanish in class, taking written and oral tests, and completing lengthy or difficult assignments. They also reported several successful coping strategies, including studying, getting the unpleasant task over with, deep breathing, and positive self-talk. In terms of their preferred teacher behaviors, these students suggested not calling on individual students, not teaching the language as a massive memorization task, and being sensitive to students out-of-class obligations.

Anxiety and Other Language Skills

As shown in the previous discussions, foreign language anxiety has been almost entirely associated with the oral aspects of language use. However, there has been a recent trend to identify more specifically the sources of anxiety and the relationship of anxiety to various second language proficiencies. In an exploratory study seeking to determine if

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

reading is anxiety-provoking for some language learners, Saito, Horwitz, and Garza (1999) found a .6 correlation in groups of American learners of French, Russian, and Japanese between general classroom foreign language anxiety as measured by the FLCAS and a newly developed measure of specific foreign language reading anxiety. In addition, they found negative relationships between both the FLCAS and the reading anxiety measure and final grades, although the relationship between reading anxiety and achievement was smaller than for the FLCAS. These findings suggest that some people find reading in the target language anxiety-provoking and that foreign language reading anxiety is distinguishable from general foreign language classroom anxiety. Interestingly, this study found that unlike general foreign language anxiety, students had differential levels of reading anxiety based on their particular target language. Japanese students were the most anxious about reading, followed by French students. This ranking of anxiety levels was surprising to the researchers who had anticipated that reading Japanese would be anxiety-provoking but had hypothesized that reading Russian would be more anxiety-provoking than reading French because of the use of the Cyrillic alphabet. In a second reading study, Sellers (2000) found that reading anxiety negatively impacted learners recall of Spanish texts, replicating a finding by Oh (1990) with Korean EFL learners. And in a study of foreign language listening anxiety, Kim (2000) found a negative relationship between foreign language listening anxiety and listening proficiency in university level English learners in Korea.

In a more comprehensive study, Cheng, Horwitz, and Schallert (1999) attempted to differentiate the components of general probably oral language anxiety and second language writing anxiety. Using factor analytic techniques, they found that the anxiety generally associated with language classes and writing anxiety were clearly distinguishable. However, both constructs had an interesting characteristic in common: students with higher levels of anxiety tended to have low self-concepts as language learners. These findings underline the importance of teacher support as noted previously. They also suggest that language anxiety is multifaceted, and therefore imply that instructional interventions need to be tailored to the specific concerns of each learner.

Conclusion

In understanding the relationship between anxiety and achievement in language learning, it is important to distinguish the role of anxiety in language learning from its role in language performance. It is often difficult to determine if anxiety has actually interfered with learning, thus influencing achievement levels, or if anxious learners simply have difficulty displaying the language competence they have attained. While the studies reviewed in this chapter offer some insight into this topic, the issue is unresolved. On the other hand, whether and to what extent

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

anxiety is negatively related to second language achievement is only one (and perhaps not even the most important) issue to consider when discussing anxiety and language learning. The large number of language learners and language teachers who have personal experiences with tension and discomfort related to language learning call for the attention of the language teaching profession.

In recent years, I have grown more interested in the experience of second language learning than in the simple prediction of its success. While language anxiety appears to be an important variable in explaining differential success in language learning, I feel that it is even more important in understanding the frustration and discomfort too many people endure when learning a second language. The studies reviewed in this chapter point to a consistent minority of language learners who find language learning an uncomfortable and unsettling experience. They also suggest some promising avenues for creating more supportive classroom environments and helping students deal with their anxieties. Thus, in addition to contributing to our understanding of second language achievement, language anxiety is fundamental to our understanding of how learners approach language learning, their expectations for success or failure, and ultimately why they continue or discontinue study.

ANNOTATED BIBLIOGRAPHY

Cheng, Y. S., Horwitz, E. K., & Schallert, D. L. (1999). Language writing anxiety: Differentiating writing and speaking components. *Language Learning, 49*, 417 446.

This factor analytic study is the first to differentiate anxieties related to different second language skills. At the same time, it finds underlying similarities between the two types of language anxieties examined here, second language writing anxiety and general foreign language classroom anxiety.

Horwitz, E. K., Horwitz, M. B., & Cope, J. A. (1986). Foreign language classroom anxiety. *The Modern Language Journal*, *70,* 125 132.

This classic paper articulates the concept of foreign language anxiety, places it in a framework of related anxieties, and offers an instrument, the FLCAS, for its measurement. In addition, it offers student self-reports of foreign language anxiety and discusses possible causes and interventions.

Horwitz, E. K., & Young, D. J. (Eds.) (1991). *Language anxiety: From*

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

theory and practice to classroom implications. Upper Saddle River, NJ: Prentice-Hall.

This edited volume contains both classic articles on language anxiety (e.g., Scovel, 1978, and Horwitz, Horwitz, & Cope, 1986) and original articles concerning research findings and instructional practice. Its six sections address anxiety and language learning; conceptualizations and research paradigms; empirical findings; student perspectives; and teaching and program strategies. Each section begins with an introduction and analysis by the editors.

MacIntyre, P. D., & Gardner, R. C. (1991b). Language anxiety: Its relation to other anxieties and to processing in native and second languages. *Language Learning, 41*, 85 117.

This study examined the factor structure underlying 23 anxiety scales and concludes that language anxiety is indeed distinguishable from other anxiety types. In addition, it examined the relationship between language anxiety and L2 processing. It found that language anxiety did interfere with L2 processing but not L1 processing. This study offers important evidence of how and why language anxiety inhibits second language learning.

Sparks, R. J., & Ganschow, L. (1991). Foreign language learning differences: Affective or native language aptitude. *The Modern Language Journal, 75*, 2 16.

This review summarizes research on affective variables in second language acquisition and concludes that L2 learning difficulties are really based in L1 learning disabilities, particularly difficulties in phonetic encoding. The authors argue that the LCDH is a more valid explanation for observed differences in L2 achievement. In addition, they suggest that the language teaching profession undervalues language-based explanations for low achievement and recommend a return to the use of language aptitude tests to help understand, diagnose, and ameliorate language learning difficulties.

Young, D. J. (Ed.) (1999). *Affect in foreign language and second language learning: A practical guide to creating a low-anxiety classroom atmosphere*. Boston: McGraw Hill.

This volume offers practical guidance to teachers who wish to minimize anxiety in language learning. It is particularly useful in that it addresses all aspects of language learning listening, speaking, reading, writing, and culture and offers specific

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

suggestions for reducing anxiety during many common language class activities. Because it appears that some amount of anxiety is inherent in language learning, this volume is an invaluable resource to teachers.

UNANNOTATED BIBLIOGRAPHY

Aida, Y. (1994). Examination of Horwitz, Horwitz, and Cope s construct of foreign language anxiety: The case of students of Japanese. *The Modern Language Journal, 78*, 155 168.

Aydin, B. (1999). A study of the sources of foreign language classroom anxiety in speaking and writing classes. Unpublished doctoral dissertation, Anadolu University, Eskisehir, Turkey.

Chastain, K. (1975). Affective and ability factors in second language acquisition. *Language Learning, 25*, 153 161.

Clément, R., Gardner, R. C., & Smythe, P. C. (1977). Motivational variables in second language acquisition: A study of francophones learning English. *Canadian Journal of Behavioral Science*, *9*, 123 133.

Clément, R., Gardner, R. C., & Smythe, P. C. (1980). Social and individual factors in second language acquisition. *Canadian Journal of Behavioral Science, 12*, 293 1302.

Coulombe, D. (2000). Anxiety and beliefs of French-as-a-second-language learners at the university level. Unpublished doctoral dissertation, University of Laval, Québec, Canada.

Donley, P. M. (1997). The foreign language anxieties and anxiety management strategies of students taking Spanish at a community college. Unpublished doctoral dissertation, University of Texas at Austin.

Ganschow, L., Sparks, R. L., Anderson, R., Javorsky, J., Skinner, S., & Patton, J. (1994). Differences in language performance among high-, average-, and low-anxious college foreign language learners. *The Modern Language Journal, 78*, 41 55.

Gardner, R. C., & MacIntyre, P. D. (1993). On the measurement of affective variables in second language learning. *Language Learning, 43*, 157 194.

Gardner, R. C., & Smythe, P. C. (1975). Second language acquisition: A social psychological approach (Research Bulletin No. 332). Ontario: University of Western Ontario.

Gardner, R. C., Smythe, P. C., & Clément, R. (1979). Intensive second language study in a bicultural milieu: An investigation of attitudes, motivation and language proficiency. *Language Learning, 9*, 305 320.

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

Horwitz, E. K. (1986). Preliminary evidence for the reliability and validity of a foreign language anxiety scale. *TESOL Quarterly, 20*, 559 562.

Horwitz, E. K. (1996). Even teachers get the blues: Recognizing and alleviating non-native teachers feelings of foreign language anxiety. *Foreign Language Annals, 29*, 365 372.

Horwitz, E. K. (2000). It ain t over til it s over: On foreign language anxiety, first language deficits, and the confounding of variables. *The Modern Language Journal, 84*, 256 259.

Kim, J-H. (2000). Foreign language listening anxiety: A study of Korean students learning English. Unpublished doctoral dissertation, The University of Texas, Austin.

Kim, S. Y. (1998). Affective experiences of Korean college students in different instructional contexts: Anxiety and motivation in reading and conversation courses. Unpublished doctoral dissertation, The University of Texas, Austin.

Kleinmann, H. H. (1977). Avoidance behavior in adult second language acquisition. *Language Learning, 27*, 93 17.

Koch, A. S., & Terrell, T. D. (1991). Affective reactions of foreign language students to natural approach activities and teaching techniques. In E. K. Horwitz & D. J. Young (Eds.), *Language anxiety: From theory and practice to classroom implications* (pp. 108 126). Upper Saddle River, NJ: Prentice-Hall.

Kunt, N. (1997). Anxiety and beliefs about language learning: A study of Turkish-speaking university students learning English in North Cyprus. Unpublished doctoral dissertation, The University of Texas, Austin.

MacIntyre, P. D. (1995a). How does anxiety affect second language learning? A reply to Sparks and Ganschow. *The Modern Language Journal, 79*, 90 99.

MacIntyre, P. D. (1995b). On seeing the forest and the trees: A rejoinder to Sparks and Ganschow. *The Modern Language Journal, 79*, 245 248.

MacIntyre, P. D., & Gardner, R. C. (1989). Anxiety and second language learning: Toward a theoretical clarification. *Language Learning, 39*, 251 275.

MacIntyre, P. D., & Gardner, R. C. (1991a). Methods and results in the study of anxiety and language learning: A review of the literature. *Language Learning, 4*, 85 117.

MacIntyre, P. D., Noels, K. A., & Clément, R. (1997). Biases in self-ratings of second language proficiency: The role of language anxiety. *Language Learning, 47*, 265 287.

McCroskey, J. C. (1970). Measures of communication-bound anxiety. *Speech Monographs, 37*, 269 277.

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

Muchnick, A. G., & Wolfe, D. E. (1982). Attitudes and motivations of American students of Spanish. *Canadian Modern Language Review, 38*, 262 281.

Oh, J. (1990). On the relationship between anxiety and reading in English as a foreign language among Korean university students in Korea. Unpublished doctoral dissertation, The University of Texas, Austin.

Palacios, L. M. (1998). Foreign language anxiety and classroom environment: A study of Spanish university students. Unpublished doctoral dissertation, The University of Texas, Austin.

Phillips, E. (1992). The effects of language anxiety on students oral test performance and attitudes. *The Modern Language Journal, 76*, 14 26.

Rodriguez, M. (1995). Foreign language classroom anxiety and students success in EFL classes. *Revista Venezolana de Linguistica Aplicada, 1,* 23 32.

Saito, Y., Horwitz, E. K., & Garza T. J. (1999). Foreign language reading anxiety. *The Modern Language Journal, 83*, 202 218.

Saito, Y., & Samimy, K. (1996). Foreign language anxiety and language performance: A study of learning anxiety in beginning, intermediate, and advanced-level college students of Japanese. *Foreign Language Annals, 29*, 239 251.

Samimy, K. (1994). Adult language learners affective reactions to community language learning: A descriptive study. *Foreign Language Annals, 27*, 379 390.

Sarason, I. G. (1978). The test anxiety scale: Concept and research. In C. D. Spielberger & I. G. Sarason (Eds.), *Stress and Anxiety: Vol. 5* (pp. 193 216). Washington, DC: Hemisphere.

Scovel, T. (1978). The effect of affect: A review of the anxiety literature. *Language Learning, 28*, 129 142.

Sellers, V. (2000). Anxiety and reading comprehension in Spanish as a foreign language. *Foreign Language Annals, 33*, 512 521.

Sparks, R. J., & Ganschow, L. (1996). Anxiety about foreign language learning among high school women. *The Modern Language Journal, 80*, 199 212.

Sparks, R. J., Ganschow, L., & Javorsky, J. (2000). Déjà vu all over again. A response to Saito, Horwitz, and Garza. *The Modern Language Journal, 84*, 251 255.

Spielberger, C. D. (1983). *Manual for the state-trait anxiety inventory.* Palo Alto, CA: Consulting Psychologists Press.

Spitalli, E. J. (2000). The relationship between foreign language anxiety and attitudes toward multiculturalism in high-school students. Unpublished master s thesis, Benedictine University, Lisle, IL.

Steinberg, F. S., & Horwitz, E. K. (1986). The effect of induced anxiety on the denotative and interpretive content of second language speech. *TESOL Quarterly, 20*, 131 136.

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press

Trickett, E., & Moos, R. (1995). *Classroom Environment Scale Manual: Development, applications, research* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Truitt, S. (1995). Anxiety and beliefs about language learning: A study of Korean university students learning English. Unpublished doctoral dissertation, University of Texas, Austin.

Trylong, V. L. (1987). Aptitude, attitudes, and anxiety: A study of their relationships to achievement in the foreign language classroom. Unpublished doctoral dissertation, Purdue University, West Lafayette, IN.

Watson, D., & Friend, R. (1969). Measurement of social-evaluative anxiety. *Journal of Consulting and Clinical Psychology, 33*, 448 457.

Young, D. J. (1986). The relationship between anxiety and foreign language oral proficiency ratings. *Foreign Language Annals, 19*, 439 445.

Young, D. J. (1990). An investigation of students perspectives on anxiety and speaking. *Foreign Language Annals, 23*, 539 553.

https://doi.org/10.1017/S0267190501000071 Published online by Cambridge University Press