

“WHY ARE COLLEGE FOREIGN LANGUAGE STUDENTS’ SELF-EFFICACY, ATTITUDE, AND MOTIVATION SO DIFFERENT?”

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ABSTRACT

Simply taking foreign language courses and being exposed to the language does not guarantee successful and positive learning experiences. When examining factors that influence foreign language learning, motivation should be considered. To extend current foreign language literature, this study integrated self-efficacy and Gardner’s AMTB variables to the understanding of learner motivation and achievement. Participants were 249 undergraduate students learning Spanish, German, and French. Regression results suggested that self-efficacy, positive attitude, and anxiety were good predictors of language achievement. MANOVA results revealed that students’ motivation levels differed significantly based on the following student differences: 1) group status (successful or unsuccessful test results), 2) self-efficacy, and 3) heritage connection to the language they were taking. The study provides interpretations and implications of the findings.

Keywords: *foreign language, self-efficacy, motivation, achievement, heritage connection*

“Why are they so different?” This is probably the most commonly asked question when teachers are in classrooms where some students are more eager to learn and others lack motivation. Nearly everyone who works with foreign language students talks about insufficient motivation yet it is regarded as a key factor in achievement. It is generally defined as the force that energizes and directs a behavior towards a goal (Schunk, 1990) and appears to affect learning and performance in many ways, such as guiding individuals to work toward goals (Dweck & Elliot, 1983; Eccles & Wigfield, 2002; Maehr & Meyer, 1997; Zimmerman, 2000) and promoting individuals to initiate activities and persist in those activities in the face of difficulty (Pintrich, Marx, & Boyle, 1993; Stipek, 1993; Wigfield & Eccles, 2002). As motivation is a process whereby learning activities are sustained when these activities require effort and persistence

from the learner's part, students who are more motivated take an active role when engaging in the task than those who are less motivated (Pintrich, 2004). Hence students' motivation can be seen through their cognitive, behavioral, and emotional engagement on academic tasks (Fredricks, Blumenfeld, & Paris, 2004; Linnenbrink & Pintrich, 2002; Pugh & Bergin, 2006) and has been found to be a strong predictor of achievement (Wigfield & Eccles, 2000).

Foreign language learning motivation

Simply taking foreign language courses and being exposed to a language does not mean that an individual can be successful in the language. When examining factors that influence foreign language learning and communication, motivational processes are definitely on the top of the list (Clément & Gardner, 2001). As foreign language learning is considered a challenging subject where many learners fail to do well (Dörnyei, 2003), learners' motivation in language studies is therefore especially important to examine.

The pioneer researchers who studied the relationship between learners' attitudes and motivation for second language learning were Gardner and Lambert (1972). They offered a differentiation between integrative and instrumental motivation for foreign language learning. Instrumentally motivated learners learn a language for practical and utilitarian purposes such as to get a better job, whereas integratively motivated learners have a desire to learn a language so as to integrate themselves with the target culture. According to Gardner and Lambert, integratively motivated learners are seen as having more enduring motivation for language learning and are therefore more likely to develop better communicative skills. The results of a study by Clément and Kruidenier (1983) supported the theory that indicated that there is a direct relationship between language learners' amount and quality of communication, their self-confidence, their motivation, and finally, their achievement. On the other hand, instrumentally motivated learners may be more likely to see language learning as enabling them to do special tasks but as not holding personal meaning in itself (Gardner, 1985). Although the premium given to integrative motivation over instrumental motivation has dominated the research literature, Gardner (2001) in a recent article no longer considered the primacy of integrative motivation as the only route to successful language learning. Gardner's social educational model of second language acquisition was developed in 1985 and revised in 2001 to assess additional aspects that contribute to the success of second language learning.

The role of motivation for language learning had often been linked to students' attitudes in Gardner's earlier work. Gardner (1985) defined motivation to learn a second language as the desire that individuals have and the content-

ment the individuals experience as they attempt to learn a language. According to Gardner's definition, there are at least three basic indicators of learner motivation: learners' effort, learners' desire to learn the language, and learners' satisfaction with learning. Gardner argued that all three components are necessary to describe foreign language learning motivation and can be assessed with the Attitude/Motivation Test Battery (AMTB) (Gardner, Clément, Smythe, and Smythe, 1979). The scales making up the AMTB were integrativeness (integrative orientation, interest in foreign languages), attitudes toward the learning situation (evaluation of teacher and course), motivation (motivational intensity, desire to learn the target language, and attitude toward learning the target language), language anxiety (language class and language use anxiety), and instrumental orientation (learning for utilitarian purposes).

Research clearly shows a positive correlation between motivation and achievement (McDermott, Mordell, & Stoltzfus, 2001; Schunk, 1991; Wang, Haertel, & Walberg, 1993). However simply acknowledging the importance of learner motivation and how motivation relates to learners' achievement does not allow us to understand fully how students develop motivation or how we can motivate students and sustain their level of motivation. Therefore, if we would like to understand and explain learners' motivation to a broader extent, knowledge of the factors that facilitate motivation to learn and achieve is critical. As a result, researchers and educators have turned to exploring why some individuals are more motivated than others to learn and how students develop motivation to complete a particular task. For example, as students encounter a task, how much motivation they have for it depends on many factors, such as their perceived value for the task, their past learning experiences, the nature of the task, and the relation between the task and their goals. Whether or not the student decides to persist in working on the task depends on the evaluation of his or her ability and the likelihood of success. Such evaluations and analyses determine whether future effort in a similar task would be worth the time. Contemporary educational psychologists suggest learning to be influenced by students' beliefs, interests, goals, values, and expectations of success. These factors play an important role in students' learning and relate to how students perform. Students with positive beliefs about their capabilities to do well are more likely to put in more effort and persist in the face of difficulties than students with sabotaging beliefs about their capabilities (Bandura, 2000; Schunk & Pajares, 2004). Likewise, students who believe that success and failure are due to factors within their control are more likely to have higher motivation and have more positive prospect for future tasks than students who believe that success is unpredictable and uncontrollable or that failure is permanent (Weiner, 1979).

Although there are a few studies that apply educational psychology concepts in the foreign language learning field, the relationship between specific cognitive motivation theories and language learners' attitude and motivation, as assessed through integrative and instrumental orientation, have not been investigated together. Tremblay and Gardner (1995) have attempted to examine the relationship between a few educational psychology motivation concepts and the more prevalent L2 concepts. However, there are a few drawbacks to the study that may limit its claims about language learners' motivation. In their study, self-efficacy was measured by learners' anxiety, performance, and expectancy, while educational psychologists assessed it through students' judgments about their capabilities to complete tasks successfully (Bandura, 1997). In addition, participants were not the typical foreign language learners but were francophones learning French in Canada. Although it is important to understand how learners' motivation and attitude predict achievement for such interesting bilingual learners, the results reported by Tremblay and Gardner should be investigated in more typical foreign language learning environments.

Since Tremblay and Gardner's (1995) study, there have been very few additional reports of studies of educational psychology theories in second language or foreign language learning situations (Dörnyei, 2003). Calls to incorporate motivation research in foreign language learning have been made several times by researchers such as Dörnyei (1994), Oxford and Shearin (1994), and Graham (2003). To extend the current foreign language motivation literature by incorporating educational psychology theories, this study integrated the theory of self-efficacy to the understanding of foreign language learners' motivation.

Self-efficacy

In recent years, students' cognitive processes have been heavily researched in the educational psychology field. A common assumption in this work is that students' beliefs are a key to understanding their actions.

Among several motivational constructs within the area of learners' beliefs, *self-efficacy* has contributed substantially to our understanding of student motivation and achievement. As defined by Bandura (1986), self-efficacy refers to people's judgment of their capabilities to complete a task successfully. Bandura (1977), acknowledged as one of the principal initiators of self-efficacy theory, suggested that one's perceived self-efficacy has a powerful influence over one's choice of activity, the kind of effort one expends, and the level of effort maintained in the face of difficulty. Consequently, self-efficacy beliefs are proposed to influence students' motivation and achievement (Multon, Brown, & Lent, 1991; Pajares, 1996, 1997; Pajares & Urdan,

2006; Valentine, DuBois, & Cooper, 2004) and are good predictors of success (Bandura, 1997). Schunk (1991) suggested that there are four leading sources for how learners develop self-efficacy for a given task. These four sources are: learners' past performances, observations of how well others do, verbal persuasion from others, and physiological indexes. Schunk explained that learners who have had positive past experiences with a learning task tend to develop higher self-efficacy than those with negative experiences. As learners observe successful performances of peers, they also develop high self-efficacy. Learners who have been convinced by an authoritative figure that they are capable tend to see themselves as capable too, as a result developing high self-efficacy. Lastly, learners who tend to have low anxiety symptoms when performing a task, as would be indicated by changes in heart rate, will likely interpret the situation as one for which they have high self-efficacy.

As much as the views of motivation used by the foreign language learning literature influenced language researchers and educators, it is interesting that more general approaches to motivation offered by the educational psychology literature have been until recently overlooked in the context of foreign language learning. Although there is extensive research on foreign language learners' self-confidence (Clément, Dörnyei, & Noels, 1994; MacIntyre, Dörnyei, Clément, & Noels, 1998), there seems to be limited foreign language research on self-efficacy, which may be seen as similar to self-confidence, even though self-efficacy is cognitively defined while self-confidence is socially defined (Dörnyei, 2005).

Horwitz (1987) noted a limitation in the literature on the interaction of beliefs with other learner variables such as attitude or motivation. As students' beliefs about language learning provide obvious relevance to the understanding of student expectations of, commitment to, success in, and satisfaction with their language classes, Horwitz (1988) argued that language teachers should understand learner beliefs about language learning in order to facilitate the learning process.

The purpose of this study was to examine the relationship between educational psychology theories (in this case, self-efficacy beliefs) and foreign language learning motivation, as defined by Gardner et al. (1979) through measures of attitude, interest, anxiety, and integrative and instrumental orientation, in a foreign language setting to address how these concepts together are related to foreign language achievement. The following research questions guided this study:

1. How well do foreign language students' self-efficacy, interest, attitude, motivation, and anxiety predict their foreign language achievement?

2. Do successful and unsuccessful foreign language students (as classified by the students themselves) and students with varying levels of self-efficacy differ in their endorsement of the different AMTB variables (interest, attitude, motivation, and anxiety)?
3. What is the interaction between heritage connection and group status (successful or unsuccessful) on students' endorsement of the different AMTB variables?

METHOD

Participants

Participants were 249 undergraduate students learning a foreign language, 53% male and 47% female, with a median age of 20 years. Of these students, 44% were taking Spanish, 32% were learning German, and 24% were learning French; 77% reported having learned another foreign language in high school. The language classes were nine Spanish, five German, and four French.

Measures

Attitude/Motivation Test Battery (AMTB). To understand students' interest, attitude, motivation, and anxiety toward the language they were learning, 32 items out of the 63 items were taken from the AMTB, developed by Gardner, Clément, Smythe, & Smythe (1979). The original AMTB consisted of eight categories: 1) attitudes toward French Canadians; 2) interest in foreign languages; 3) attitudes toward European French people; 4) attitudes toward learning French; 5) integrative orientation; 6) instrumental orientation; 7) French class anxiety; and 8) parental encouragement. For the purposes of this study, students were only asked to answer questions related to their interest in the foreign language, attitudes toward learning the target language, integrative orientation, instrumental orientation, and target language class anxiety. The "interest in foreign language" items question whether or not students wish to learn the foreign language. The "attitudes toward learning the target language" items ask how much students like or dislike learning the target language: in this study, Spanish, German, or French. Both the "integrative orientation" items and the "instrumental orientation" items ask the reasons why students want to learn the target language. The "language class anxiety" items question whether or not students feel anxious about speaking in the target language. Due to the wording of several of the AMTB items, some categories and items were modified to correspond to the nature of this study. For example, items that were related to "French" were modified to either "Spanish" or "German" since these were the languages that were incorporated in this study. Categories such as "At-

titudes toward European French people” and “Parental Encouragement” were deleted from the original questionnaire. Responses were given on a 5-point Likert scale with the anchors “strongly disagree” to “strongly agree”. For this study, the internal consistency values for each subscale were as follows: interest, .86; positive attitude, .86; negative attitude, .89; integrative orientation, .77; instrumental orientation, .54; anxiety, .83.

Self-efficacy. Participants were given a list of seven scores they could potentially receive on their next test. Self-efficacy was measured by asking participants to circle either “yes” or “no” according to whether they felt they were able to score a particular score. Then, for each of the scores to which they circled “yes,” students had to indicate how confident they were in scoring each score. The self-efficacy measures were on a scale of 0 to 100, where 100 = very certain and 0 = very uncertain. This way of measuring self-efficacy has been used in other studies and has been found to account for the most variance in the dependent variable (Bond, Biddle, & Ntoumanis, 2001; Stajkovic & Sommer, 2000; Wood & Locke, 1987). Self-efficacy was calculated by averaging the percentages that students indicated for each score. Internal consistency for this seven-item scale was .86.

Language achievement. Students’ final course grades were used as a measure of their achievement. These grades were obtained from students’ instructors at the end of the semester. The mean final course grade for each language was: Spanish $M = 90.04$ ($SD = 8.51$), German $M = 89.12$ ($SD = 7.41$), French $M = 90.65$ ($SD = 4.43$).

Procedure

In the Fall semester after students received grades from their mid-term exam, students completed the two questionnaires during the beginning of one class period after receiving students’ consent for participation. Students were also asked to fill out some background information such as their gender, whether or not they had heritage connection to the language they were learning, and a question asking students whether they considered their exam score a success or a failure. The instructors provided students’ final course grades at the end of the semester.

Data Analyses

To examine the contribution of students’ self-efficacy to the prediction of students’ foreign language achievement and to see whether the variables measured by AMTB would significantly improve this prediction over and above self-efficacy, a hierarchical multiple regression analysis was conducted. As many research-

ers have suggested, self-efficacy is highly predictive of achievement (Schunk & Pajares, 2005); thus, one of the goals of this study is to examine whether AMTB variables added significant variance to the prediction of students' final course grade. To analyze the second question on whether successful and unsuccessful students and students with different levels of self-efficacy endorsed AMTB variables differently, MANOVA was run. In addition, MANOVA was run to examine the interaction effect between students' group status (successful or unsuccessful) and heritage connection on AMTB measures.

RESULTS

Descriptive Statistics

Table 1 presents the means, standard deviations, and correlations for all variables measured in the study. Results indicated that, out of the seven variables, self-efficacy and positive attitude were positively correlated with final course grade and negative attitude and anxiety were negatively correlated with final course grade.

Predictors of Foreign Language Achievement

Hierarchical multiple regression results indicated that Model 1 (the first step of the hierarchical regression using self-efficacy as the only predictor) significantly predicted foreign language achievement, $F(1, 231) = 120.32, p < .001$, accounting for 34% of the variance. This finding is consistent with past self-efficacy research findings (Multon et al., 1991) such that self-efficacy is a strong predictor of achievement. In Model 2, it was found that the addition of all the AMTB measures (interest, positive and negative attitude, integrative and instrumental orientation, and anxiety) significantly increased the variance explained in foreign language achievement, $\Delta R^2 = .04, \Delta F(6, 225) = 2.22, p < .05$, and resulted in an overall regression model that explained 38% of the variance in achievement, $F(7, 225) = 19.64, p < .001$. Given that variables at both levels significantly predicted final course grades but that the second model accounted for significantly more of the variance, the interpretations of the second model are reported in Table 2. Results suggest that in addition to students' self-efficacy beliefs, their attitude and anxiety were also good predictors of language achievement. This study adds to the current foreign language motivation and self-efficacy literature that solely focused on the positive effects of either the integrative orientation or self-efficacy on language achievement.

Effects of Group Status (Successful/Unsuccessful) and Self-efficacy on Interest, Attitude, Integrative Orientation, Instrumental Orientation, and Anxiety

To address the research question of whether or not successful and unsuccessful foreign language students and students with varying levels of self-efficacy differ in their endorsement of the different categories of the AMTB (i.e., interest, positive attitude, negative attitude, integrative orientation, instrumental orientation, and anxiety), a 2 x 2 multivariate analysis of variance (MANOVA) was carried out.

Multivariate F tests indicated significant differences between successful and unsuccessful students in terms of the AMTB scores, Wilks's $\lambda = .95$, $F(6, 240) = 2.21$, $p < .05$, partial η^2 (effect size) = .05. This is to say that 5% of the variability in the dependent variable scores was explained by the group membership in the independent variable. ANOVAs on each dependent variable were conducted as follow-up tests to the MANOVA using Bonferroni. Results indicated that unsuccessful students tended to endorse instrumental orientation more strongly ($M = 3.48$, $SD = .58$) than successful students ($M = 3.24$, $SD = .66$), $F(1, 245) = 5.94$, $p < .01$, $MSe = 6.57$, partial $\eta^2 = .02$ (fairly small effect size). Similarly, students in the unsuccessful group reported having higher anxiety ($M = 2.86$, $SD = .94$) than successful students ($M = 2.58$, $SD = .73$), $F(1, 245) = 5.60$, $p < .01$, $MSe = 14.99$, partial $\eta^2 = .02$. These fairly small effect sizes mean that the strength of the difference is weak, but does not suggest the findings are insignificant.

In addition, results also indicated significant differences between high and low self-efficacy students in terms of the AMTB scores, Wilks's $\lambda = .91$, $F(6, 240) = 4.09$, $p < .001$, partial $\eta^2 = .09$ (small effect size). ANOVAs on each dependent variable were conducted as follow-up tests to the MANOVA. Results showed that students with higher self-efficacy reported having significantly higher interest in learning the foreign language ($M = 4.01$, $SD = .65$) than students who reported having lower self-efficacy ($M = 3.63$, $SD = .76$), $F(1, 245) = 12.67$, $p < .001$, $MSe = 40.53$, partial $\eta^2 = .05$ (somewhat small effect size). Similarly, students with higher self-efficacy tended to have a more positive attitude about learning the foreign language ($M = 3.92$, $SD = .75$) than students who reported having lower self-efficacy ($M = 3.46$, $SD = .80$), $F(1, 245) = 15.06$, $p < .001$, $MSe = 15.17$, partial $\eta^2 = .06$ (small effect size). Results also showed that students with higher self-efficacy endorsed integrative orientation more strongly ($M = 3.79$, $SD = .69$) than low self-efficacy students ($M = 3.54$, $SD = .82$), $F(1, 245) = 4.56$, $p < .05$, $MSe = 9.07$, partial $\eta^2 = .02$ (fairly small effect size). On the other hand, students with lower self-efficacy reported significantly more negative attitude towards learning the foreign language ($M = 2.15$, $SD = .79$) than higher self-efficacy students ($M = 1.87$, $SD = .78$), $F(1, 245) = 5.34$, $p < .01$, $MSe = 15.46$, partial $\eta^2 = .02$ (fairly small effect size), and reported sig-

nificantly more anxiety ($M = 2.88$, $SD = .81$), than higher self-efficacy students ($M = 2.57$, $SD = .75$), $F(1, 245) = 7.13$, $p < .01$, $MSe = 14.99$, partial $\eta^2 = .03$ (fairly small effect size).

Although results reported here indicate small effect sizes, nevertheless, these are important findings. As Trusty and his colleagues suggested, effect sizes may be small, yet for important outcomes, results can be extremely important. On the contrary, large effect sizes may not be important if they imply trivial outcomes (Trusty, Thompson, & Petrocelli, 2004). Results of this study are of great importance as they inform educators and researchers as to the significance of monitoring students' perception of themselves (i.e. successful or unsuccessful, highly efficacious or not) as these beliefs influence students' motivation to learn.

Interaction between Group Status (Successful/Unsuccessful) and Heritage Connection on Interest, Attitude, Motivation, and Anxiety

To address this research question, a MANOVA was carried out first, to examine whether students who had a heritage connection to the language they were learning and those who did not have a heritage connection differed in terms of their levels of interest, attitude, orientation, and anxiety towards the foreign language.

Multivariate F tests indicated significant differences between heritage and non-heritage students in terms of the AMTB scores, Wilks's $\lambda = .83$, $F(6, 188) = 6.58$, $p < .001$, partial $\eta^2 = .17$. This is to say that 17% of the variability in the dependent variable scores was explained by the group membership in the independent variable. ANOVAs on each dependent variable were conducted as follow-up tests to the MANOVA using Bonferroni. Results indicated that heritage students tended to have higher interest, $F(1, 193) = 13.53$, $p < .001$, $MSe = 43.90$, partial $\eta^2 = .07$ (small effect size), have more positive attitude, $F(1, 193) = 20.15$, $p < .001$, $MSe = 15.86$, partial $\eta^2 = .10$ (small effect size), endorse integrative orientation more strongly, $F(1, 193) = 20.81$, $p < .001$, $MSe = 8.86$, partial $\eta^2 = .10$ (small effect size), and have less anxiety toward the language, $F(1, 193) = 15.59$, $p < .001$, $MSe = 14.43$, partial $\eta^2 = .08$ (small effect size) than non-heritage students. The means and standard deviations are presented in Table 3.

In addition, MANOVA results indicated a significant group status by heritage connection interaction, Wilks's $\lambda = .91$, $F(6, 188) = 3.20$, $p < .01$, partial $\eta^2 = .09$ (small effect size). ANOVAs on each dependent variable were conducted as follow-up tests to the MANOVA. Results indicated that among students who did not have a heritage connection, those who were successful reported having a more positive

attitude ($M = 3.61$, $SD = .82$) than those who were unsuccessful ($M = 3.33$, $SD = .89$), $F(1, 193) = 4.15$, $p < .05$, $MSe = 65.84$, partial $\eta^2 = .02$ (fairly small effect size). However, no significant differences were found between successful and unsuccessful heritage students. Results indicated that these two groups of heritage students reported having equally high positive attitudes toward the language they were learning regardless of their perceptions of test outcome (see Figure 1).

Results also indicated that for students who had a heritage connection, interestingly, those who saw their test scores as a failure reported having more integrative orientation ($M = 4.44$, $SD = .81$) than those who saw their test scores as success ($M = 3.91$, $SD = .61$), $F(1, 193) = 3.99$, $p < .05$, $MSe = 35.38$, partial $\eta^2 = .02$ (fairly small effect size). For students who had no heritage connection, no significant differences were found in the endorsement of integrative orientation between successful and unsuccessful students. In fact, students who had no heritage connection to the language they were learning reported having lower integrative orientation than those with heritage connection (see Figure 2). Lastly, a significant difference was found for students' reported anxiety level in the "no heritage connection" group. Those who considered their grades a failure reported having significantly higher anxiety ($M = 3.14$, $SD = .91$) than those who considered themselves successful ($M = 2.58$, $SD = .74$), $F(1, 193) = 11.65$, $p < .001$, $MSe = 168.06$, partial $\eta^2 = .06$ (small effect size). No significant differences in anxiety level were found for the heritage students (see Figure 3). Again, although effect sizes are small in the findings, educators should take caution when interacting with students who have no heritage connection to the language they are trying to learn. Results indicated that non-heritage learners seem to have less interest and more negative attitudes towards the language they are learning, and have more anxiety towards learning the language than their peers who have heritage connections to the language.

DISCUSSION

One of the purposes of this study was to determine whether factors other than self-efficacy would predict students' foreign language achievement. Results of this study indicated that, although students' self-efficacy was once again found to be a good predictor of achievement, additional variables provided by the foreign language field (i.e., AMTB variables such as attitude and anxiety) were found to be stronger predictors of the final course grades than did students' self-efficacy alone. Results may suggest that students who had a positive attitude towards the foreign language they were taking and those who did not experience anxiety in the foreign language classroom were more apt to experience academic success in Spanish, German, and French.

Overall, the results indicated significant differences between the successful and unsuccessful students, such that successful students reported being more integratively oriented and wanting to learn the foreign language so as to interact with individuals of the target culture. Unsuccessful students on the other hand reported significantly more anxiety toward the foreign language class, feeling nervous when asked to speak in class.

Differences were also found between students with high and low self-efficacy such that students with higher self-efficacy reported being more interested in learning the foreign language, having more positive attitude, and having higher integrative orientation. As self-efficacy is one's beliefs about how capable they can be in successfully completing a task (Bandura, 1997) and it can influence effort, persistence, and achievement, it is not surprising that students who have low self-efficacy in this study reported having more negative attitude and higher anxiety toward the foreign language they were learning.

An interesting finding was the interaction effect between students' group status (successful or unsuccessful) and heritage connection. It was found that successful non-heritage students had more positive attitude toward the foreign language they were learning and had lower anxiety than unsuccessful non-heritage students. However, heritage students exhibited no differences, with both groups having high positive attitude and overall low anxiety, which can be considered *protective factors* for learning. It is students without heritage connection that need teachers' special attention as their attitudes and anxiety levels can be influenced by their test outcomes (success or failure). Upon developing negative attitudes toward the foreign language class and having high anxiety, maladaptive learning patterns can arise, which may result in low achievement.

Interestingly, results indicated no difference in the endorsement of integrative orientation between successful and unsuccessful non-heritage students. Differences were found between successful and unsuccessful heritage students, such that unsuccessful heritage students endorsed integrative orientation more strongly than successful heritage students. This is an interesting finding and may suggest that heritage students' main goal for learning the language is to communicate with family members or with people of the target culture. They did not strive to do their very best on course exams thus the unsuccessful test results. This, however, is only a speculation as MANOVA results do not suggest any direction and does not imply causation.

Implications should be interpreted with limitations in mind. First, data was gathered in the United States, and participants were college Spanish, German, and French students; consequently limiting the generalizability of results. Second, results are based on self-report data, and it may be difficult to determine whether

some students may have misinterpreted items on the questionnaires. Acknowledging these limitations, these results provide interesting theoretical implications.

The significant impact of students' self-efficacy and attitude towards learning on students' persistence and success is without question. However, the key is to identify ways to help learners develop high self-efficacy perceptions and positive attitudes and optimize their motivation to reach success. Researchers have suggested that teachers may be able to increase students' self-efficacy and attitude by encouraging students to set concrete and realistic goals and providing positive but accurate feedback. Teachers should also implement strategies to improve students' quality of work and teach students to appreciate the effort they put into each learning task. In addition, beginning a foreign language lesson with open-ended questions, setting realistic expectations for performance, and using a variety of teaching methods and learning strategies can also help students develop high self-efficacy for learning the language, reduce anxiety, and optimize the learning experience.

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TABLE 1

Correlations Among Self-efficacy, AMTB Variables and Final Course Grade

	Mean	SD	1	2	3	4	5	6	7
1 Final Course Grade	83.11	12.12							
2 Self-efficacy	72.92	18.36	.59**						
3 Interest	3.81	.72	.12	.21**					
4 Positive Attitude	3.71	.81	.24**	.31**	.79**				
5 Negative Attitude	1.99	.80	-.14*	-.21**	-.72**	-.83**			
6 Integrative Orientation	3.64	.76	.13	.14*	.72**	.68**	-.61**		
7 Instrumental Orientation	3.31	.65	.06	.14*	.39**	.45**	-.31**	.50**	
8 Anxiety	2.64	.80	-.30**	-.28**	-.21**	-.30**	.36**	-.16*	.06

* $p < .05$, ** $p < .01$

TABLE 2
Multiple Regression Analyses Predicting Foreign Language Achievement

Model	Variable	Standardized coefficient β	t	Significance	Zero-order Correlation
1	Self-efficacy	.59	10.97	.00	.59
2	Self-efficacy	.53	9.20	.00	.59
	Interest	-.17	-1.76	.08	.12
	Positive Attitude	.22	1.86	.05	.24
	Negative Attitude	.13	1.30	.20	-.14
	Integrative Orientation	.08	.98	.33	.13
	Instrumental Orientation	-.05	-.72	.47	.06
	Anxiety	-.16	-2.64	.01	-.30

TABLE 3
Mean (Standard Deviations) Scores for Each AMTB Variables for Student Who Have Heritage Connection to the Language They were Learning and Students Who Do Not Have Heritage Connection

Dependent Variable	Heritage Connection	Mean (SD)	Significance
Interest	No	3.64 (.79)	.00
	Yes	4.19 (.50)	
Positive Attitude	No	3.47 (.85)	.00
	Yes	4.19 (.64)	
Negative Attitude	No	2.14 (.85)	.00
	Yes	1.60 (.55)	
Integrative Orientation	No	3.48 (.77)	.00
	Yes	4.17 (.68)	
Instrumental Orientation	No	3.26 (.70)	.12
	Yes	3.48 (.61)	
Anxiety	No	2.87 (.83)	.00
	Yes	2.26 (.65)	

FIGURE 1.

Interaction effect of Heritage Connection x Group Status on Positive Attitude.

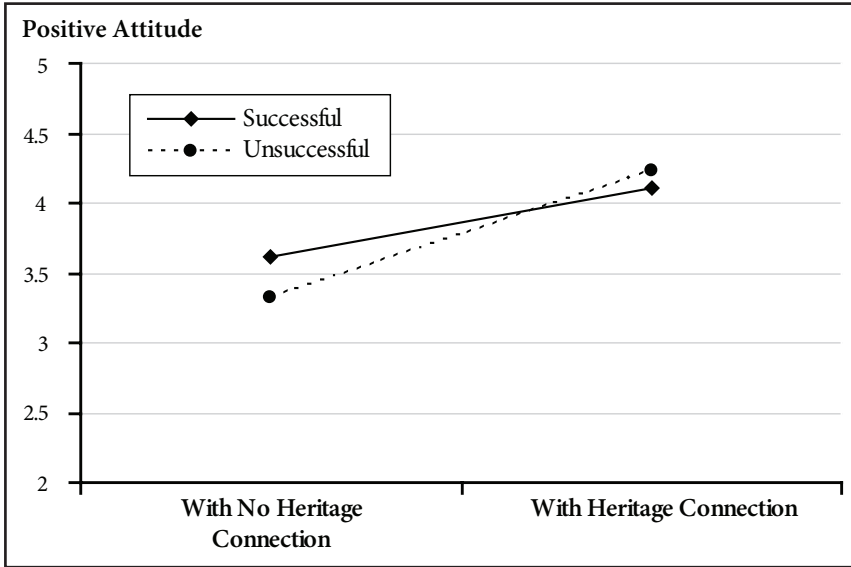


FIGURE 2.

Interaction effect of Heritage Connection x Group Status on Integrative Orientation.

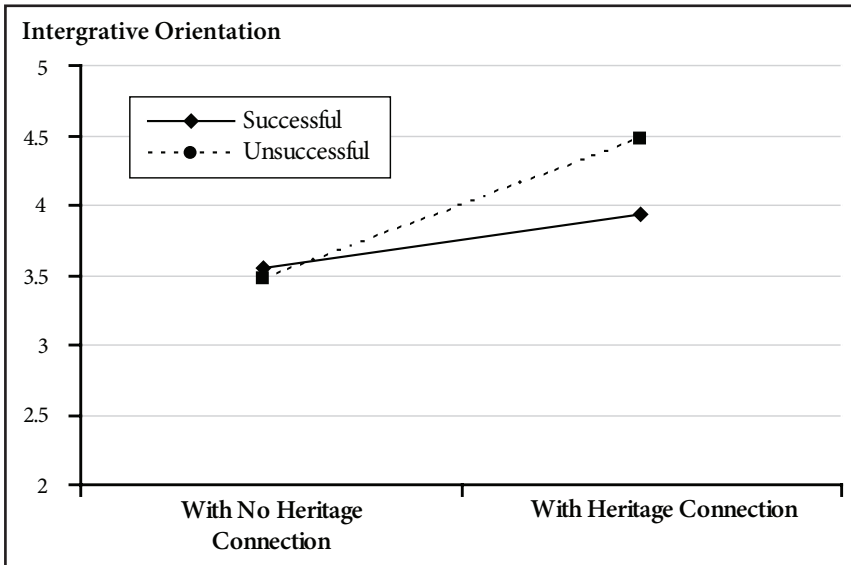


FIGURE 3.

Interaction effect of Heritage Connection x Group Status on Anxiety.

