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A Goal Orientation-Self Efficacy Model of Foreign Language Proficiency Development

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Goal Orientation as a Predictor of Foreign Language Proficiency

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A significant body of research has found that goal orientation predicts important performance outcomes in work and academic settings (e.g., Elliot & Church, 1997; VandeWalle, Brown, Cron, & Slocum, 1999). However, goal orientation research has seldom investigated another important criterion variable—competency development via training in an employment setting (see Brett & VandeWalle, 1999 for an exception). This neglected area of research is surprising given that the central focus of goal orientation is one's concern about competency and requisite competency is a partial requirement for successful performance. Thus, in the current research, we propose and test a model in which self-efficacy mediates the relationship of goal orientation and competency development in the context of a job-related foreign language training program. We develop our model by first summarizing the concept of goal orientation, then propose self-efficacy as a predictor of developing foreign language competency, and then develop the relationship of goal orientation with self-efficacy.

Goal Orientation

Dweck and her colleagues (i.e., Dweck, 1986, 1999; Elliott & Dweck, 1988) proposed that individuals pursue two broad classes of underlying goals in achievement settings: (a) a *learning goal orientation* to develop competence by acquiring new skills and mastering new situations, and (b) a *performance goal orientation* to demonstrate competence and validate worth by seeking favorable judgments and avoiding negative judgments about one's competence. An

extensive body of research indicates that learning and performance goal orientations predict differential patterns of affective, cognitive, and behavioral responses when individuals encounter adversity on a challenging task (Dweck, 1999).

Subsequent to Dweck's seminal theory development, scholars (e.g., Elliot & Harackiewicz, 1996; VandeWalle, 1997) proposed a three-factor model of goal orientation for which the performance goal orientation is refined into two sub-dimensions-

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- proving and avoiding.¹ While both performance dimensions are about competence concerns, a proving orientation focuses on demonstrating one's competence and the gaining of favorable judgments from others, while an avoiding orientation focuses on preoccupation about not revealing a lack of ability and avoiding negative ability judgments from others.

Self-Efficacy and Foreign Language Competency Development

Self-efficacy refers to the belief that one has the capacity to organize and execute the course of action required to produce a desired outcome (Bandura, 1997). The robustness of the positive relationship between self-efficacy and performance was demonstrated by Stajkovic and Luthans (1998) who found in their meta-analysis of 114 studies that self-efficacy contributed a 28 percent gain in work-related performance.

Although scholars have proposed that self-efficacy should be assessed in models of learning a second language learning theories, sparse research has been conducted on assessing such a model in academic settings (Cheng, 2002). The extant research indicates that students' academic behaviors and performance are influenced by their self-perceptions and their beliefs about their academic potential (Pajares & Schunk, 2002). However, these studies (i.e., MacIntyre, Clément, Dörnyei, & Noels, 1998) have primarily focused on general self-confidence, a construct that is not identical to task specific self-efficacy. Furthermore, we are unaware of any published studies that have assessed self-efficacy as a predictor of developing foreign language competency for adult employees in work settings.

Although there is a dearth of such research in the foreign language domain, the following evidence provides support for our proposal that self-efficacy for learning a foreign language will have a positive relationship with developing foreign language proficiency. First, self-efficacy fosters intrinsic motivation and engrossment in activities. Intrinsic

motivation enhances productive self-regulation, and indeed, research finds that self-efficacy has positive relationships with how much effort individuals expend on a task, how long they persist, and how resilient they are in the face of setbacks (Bandura, 1997). Second, those with high self-efficacy are less prone to debilitating off-task thought patterns (Bandura, 1997). With the mitigation of off-task disruption, individuals with high self-efficacy have the potential for more effective allocation of cognitive resources and the use of productive meta-cognitive strategies for learning (Zimmerman, Bandura, & Martinez-Pons, 1992). Third, researchers have found a positive relationship for self-efficacy with successful mastery of mathematical competency (Schunk, 1984). This positive relationship is especially relevant to the current research because similar to mathematics, learning a second language is often perceived as a function of one's natural ability (Jernigan, 2004). Given this array of evidence, we propose that self-efficacy for learning a foreign language will also have a positive relationship with development of foreign language competency.

Goal Orientation and Self-Efficacy

Chen, Casper, and Cortina (2001) noted that most self-efficacy research had focused on situational antecedents of self-efficacy such as enactive mastery and vivacious experiences. However, they also noted that more recent research has examined individual differences as predictors of self-efficacy. Related to the current research, Phillips and Gully (1997) found that learning and performance goal orientations² had path coefficients of .13 ($p < .05$) and -.14 ($p < .05$) respectively with self-efficacy for performing well on an undergraduate management course exam (see also VandeWalle, Cron, & Slocum, 2001 for additional evidence with undergraduate course exams). While such studies provide initial evidence for a goal orientation-self-efficacy relationship for an academic course exam, we are unaware of such evidence for adults in a work setting

engaged in an intensive job-related training program. We thus build our case for the relationship of goal orientation and self-efficacy based on the extant research in academic settings and booster this research with relevant research findings for adults in work settings. Based on the following, we propose that there is a strong likelihood that the relationship found for an undergraduate course exam will generalize to adults in work training settings. Specially, we propose for adults in a work setting that the mindsets associated with a strong learning goal orientation should also lead to a positive relationship between self-efficacy for learning a foreign language and competency development in a foreign language training program. In contrast, we do not expect either the proving or avoiding dimensions of a performance goal orientation to be beneficial for self-efficacy for learning a foreign language.

First, learning and performance goal orientations are associated with different levels of *implicit* theories about the changeability of personal attributes, such as intellectual ability and interpersonal skills. A learning goal orientation is associated with a more incremental level of implicit theory— a personal attribute such as ability is viewed as a more malleable attribute that can be developed with effort and persistence. In contrast, the proving and avoiding dimensions of a performance goal orientation are associated with a more entity level of implicit theory— ability is viewed as a more fixed, innate attribute that is difficult to develop. Extensive research by Heslin and colleagues (i.e., Heslin, VandeWalle, & Latham, 2006) has found that adults in employment settings also hold implicit theories that vary along the entity to incremental continuum.

Second, learning and performance goal orientations are associated with different mindset profiles. For example, Button, Mathieu, & Zajac (1996) found that a learning goal orientation had a positive relationship with an internal locus of control--the belief that one's actions are a primary determinant of

events and outcomes in one's life. In contrast, a performance goal orientation had a non-significant relationship with an internal locus of control. Duda and Nicholls (1992) found that individuals differ in their beliefs about the causes of success. A learning goal orientation is associated with a belief that effort is a primary determinant of success, while a performance goal orientation is associated with a belief that high ability is a primary determinant of success. VandeWalle (1996) found that optimism had a positive relationship with learning goal orientation, a neutral relationship with a proving goal orientation, and a negative relationship with an avoiding goal orientation. Summarizing these profiles, with a strong learning goal orientation, the positive mental framing of self determination, the utility of effort, and optimism should all be conducive for enhancing self-efficacy. In contrast, given that the proving and avoiding dimensions of a performance goal orientation are associated with a weaker belief in self determination, the utility of effort, and optimism, such a mindset is likely to be neutral at best for one's self-efficacy.

Finally, several studies with adults in other domains and similar constructs are also consistent with the prediction of a positive relationship of a learning goal orientation with self-efficacy. For example, in a longitudinal study with over 400 junior-military leaders, Boyce (2007) found that a learning goal orientation had a positive relationship with general self-efficacy. In a study with adult exercisers, Cumming and Hall (2004) found those with high levels of task orientation (a construct with conceptual similarity to a learning goal orientation), were characterized by having higher levels of self-efficacy than exercisers with low levels of task orientation. In contrast, an ego orientation (a construct with conceptual similarity to a performance goal orientation) was unproductive for exercise self-efficacy.

To summarize, for adults in working training settings, there is evidence consistent with our proposal of a goal orientation-self

efficacy relationship. Specific to the current research, we propose that a learning goal orientation will have a positive relationship with self-efficacy to learn a foreign language. And, self-efficacy will mediate the relationship of a learning goal orientation and foreign language proficiency. In contrast, we expect that a performance goal orientation (both the proving and avoiding dimensions) will not be beneficial for such self-efficacy.

Method

Participants and Overview

Participants were 509 Special Operations personnel in a job-related foreign language training program. The curriculum was designed to train a base level of proficiency in a language necessary for operations in the field. The language training block was part of larger job-certification training process. Participants could not proceed to their job assignment without successfully graduating from language training. Because Special Operations units are regionally oriented, each soldier was assigned to a language based on projected operational needs and their language aptitude score on the Defense Language Aptitude Battery (DLAB; for a discussion of the DLAB see for Silva & White, 1993).

Participants received the pre-training questionnaire during “in-processing” for the foreign language training. The training consisted of 19 to 25 weeks of classroom language instruction, supplemented with language lab and tutoring as needed. The difficulty of the language³ determined the length of the training. Languages are divided into four categories based the difficulty for a native speaker of English to learn the language. For example, Spanish is a *Category I* language, German is a *Category II* language, Russian is a *Category III* language, and Arabic is a *Category IV* language. Training for *Category I and II* languages was 19 weeks whereas training for *Category III and IV* languages was 25 weeks in duration. Regardless of language, all participants had the same curriculum content and training

protocols. At the completion of training, trainees are required to demonstrate their proficiency on the military’s official language proficiency assessments. The study post-training questionnaire was administered during the “out-processing” of the participants. The measurement for this study was part of larger research initiative assessing the effectiveness of language training for the Special Operations community.

Measures

Goal orientation. Before the start of the language training program, we assessed work domain goal orientation with the 13-item instrument developed and validated by VandeWalle (1997). Five items measured a learning goal orientation, four items measured a proving goal orientation, and four items measured an avoiding goal orientation. A 7-point Likert-type response scale, ranging from 7 (*strongly agree*) to 1 (*strongly disagree*), was used for each item. For each orientation, a scale variable was created using the arithmetic mean of the item responses.

Cognitive ability. General cognitive ability plays a substantial role in both successful learning (Ree, Carretta, & Teachout, 1995) and job performance (Hunter & Schmidt, 1998; Ree, Earles, & Teachout, 1994). General cognitive ability was assessed using Armed Forces Qualification Test scores (AFQT). The AFQT is a composite score consisting of two verbal and two math tests from the ASVAB (Ree & Carretta, 1994) and is commonly used as a measure of general cognitive ability (Carretta & Doub, 1998). AFQT scores, which are reported as percentiles, correlate well with standardized tests of intelligence (Orme, Brehm, & Ree, 2001).

Language Aptitude. The Defense Language Aptitude Battery (DLAB) was used to measure language aptitude. This is a multiple choice test that requires examinees to learn and use an artificial language. It was devised to assess the most important abilities needed to learn a second language, such as the ability to process auditory phonetic material.

The DLAB has been shown to contribute significant incremental validity to the prediction of language proficiency, above and beyond measures of general aptitude (g) (Silva & White, 1993).

Self-Efficacy. We assessed self efficacy for learning a foreign language with a 9-item scale based on prior foreign language self-efficacy research by Cheng (2001) and Bandura's (1997) discussion of domain specificity for self-efficacy. A 7-point Likert-type response scale, ranging from 7 (*strongly agree*) to 1 (*strongly disagree*), was used for each item.

Foreign Language Proficiency. The Defense Language Proficiency Test (DLPT) served as our measure of second language listening and reading proficiency. The DLPT is specific to the language trained and consists of a test of reading comprehension (2.5 hours) and a test of listening comprehension (1.5 hours) (Silva & White, 1993). The DLPT is designed to assess language proficiency as defined by the Interagency Language Roundtable (ILR) language skill level descriptions (Interagency Language Roundtable, 1985).⁴ The DLPT has multiple versions which are developed, validated, and standardized by the Defense Language Institute. Personnel receiving government-funded second language training are required to take the DLPT every year. Additionally, Foreign Language Proficiency Pay is based on the DLPT scores. The converted DLPT scores are comparable across test versions and languages and were used in our analyses.

Results

Mplus 3.13 software (Muthén & Muthén, 1998-2005) was used to assess the structural equation model fit to the data. The sample covariance matrix was used as the input data, and the correlation matrix is reported in Table 1. For each construct, the observed indicators were combined into a single index measure equal to the arithmetic mean of the item scores.

We estimated two primary models. First, we estimated a base model without a direct link between cognitive ability and foreign language proficiency (listening and reading). Estimation of the base model resulted in a fit of $\chi^2(285, N = 509) = 982.05, p < .01$; SRMR = .052; RMSEA = .069; CFI = .912; TLI = .90). The fit indices suggest a good fit of the data to the hypothesized model. The standardized path coefficients are presented in Figure 1 and support our proposal that a learning goal orientation would have a positive relationship with self-efficacy, and in turn, self efficacy would have a positive relationship with foreign language proficiency (for both reading and listening dimensions). In contrast, neither the proving or avoiding dimensions of a performance goal orientation had significant relationships with self efficacy. The results were robust when cognitive ability was added to the model.

For our second key model, we added paths for cognitive ability with foreign language proficiency. Estimation of the second model resulted in a fit of $\chi^2(284, N = 509) = 950.05, p < .01$; SRMR = .048; RMSEA = .068; CFI = .916; TLI = .904). As shown in Figure 2, the relationships of self-efficacy with both forms of foreign language proficiency remained significant despite the addition of cognitive ability as a predictor variable.

Discussion

Our study found that a learning goal orientation is a strong predictor of self-efficacy for learning a foreign language, which in turn, predicted listening and reading proficiency after a foreign language training program.

The findings of our research are especially interesting given the research design for our study. Specifically, we assessed self-efficacy *before* the start of the foreign language training program. However, a core underpinning of goal orientation theory is that goal orientation is an especially strong predictor of cognition, behavior, and

performance when one faces setbacks such as negative feedback for performance on a challenging task. With an intense language training program of 19-25 weeks duration, there are likely to be many opportunities for such setbacks. In such situations, individuals with a strong learning goal orientation tend to view negative feedback as informative information about what one needs to change to successfully improve performance and/or achieve mastery. In contrast, for individuals with a strong performance goal orientation, negative feedback tends to be framed as judgmental information about one's competency and worth. While this line of thought was based on research with adolescents in school settings (Dweck, 1999; Dweck & Leggett, 1988), Heslin and VandeWalle (2005) found in more recent research that adults in work settings also hold such views about the meaning of negative feedback. Extending this insight to adults in an intense training program, we suggest that when negative feedback about training progress is encountered, that self-efficacy is likely to be resilient with a strong learning goal orientation, because the feedback is framed in a more positive light as informative information about changes needed. In the long-run, such feedback could also enhance self-efficacy as one now would have a stronger understanding of the path needed to achieve greater mastery. In contrast, with a strong performance goal orientation, if personal attributes such as intelligence are viewed as fixed in nature, and negative feedback is perceived as a judgmental indictment of low ability, the outcome is more problematic. In essence, one has received negative information about an ability that is viewed as more innate and fixed in nature, so the prognosis for mastery, and thus the self-efficacy to achieve mastery, is likely to be undermined. Thus, we anticipate in future research that if repeat measures of self-efficacy were collected during a training program, that self-efficacy would have even stronger relationship magnitudes with a

performance goal orientation and with foreign language proficiency.

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Footnotes

¹For an excellent review of theoretical development and empirical research for the three-dimensional model of goal orientation, the reader is recommended to Elliot and Thrash (2001).

²For terminology, we use the term performance goal orientation when the measurement of this concept assesses only a one-factor model of a performance goal orientation in the cited study. For studies where both the proving and avoiding goal orientations are separately used, we use those two terms.

³The military and other government agencies have classified all languages into four categories (Categories I through IV) that reflect the increasing difficulty of a native English speaker to learn the language (Silva & White, 1993). For example, Spanish is a Category I language, German is a Category II, Russian is a Category III, and Arabic is a Category IV. Table 1 displays the specific languages and their categories from our sample. Additionally, the American Council on Education (ACE) uses language difficulty as part of the basis for its official recommendations for awarding college credit for scores on the American Council on the Teaching of Foreign Languages' Oral Proficiency Interview.

⁴The Interagency Language Roundtable actually described proficiency up to level 5 (functionally native proficiency). The DLPT assesses reading and listening skills from level 0 to level 3. Level 0 is considered no proficiency, and level 3 is considered general professional proficiency. Most military positions with a language capability require a level 2 proficiency (limited working proficiency) in listening and reading. Any military personnel who have received government-sponsored second language training or who have tested and received a Level 1 (elementary proficiency) must test annually.

Table 1. Means, Standard Deviations, Reliabilities, and Zero-Order Correlations Among the Variables

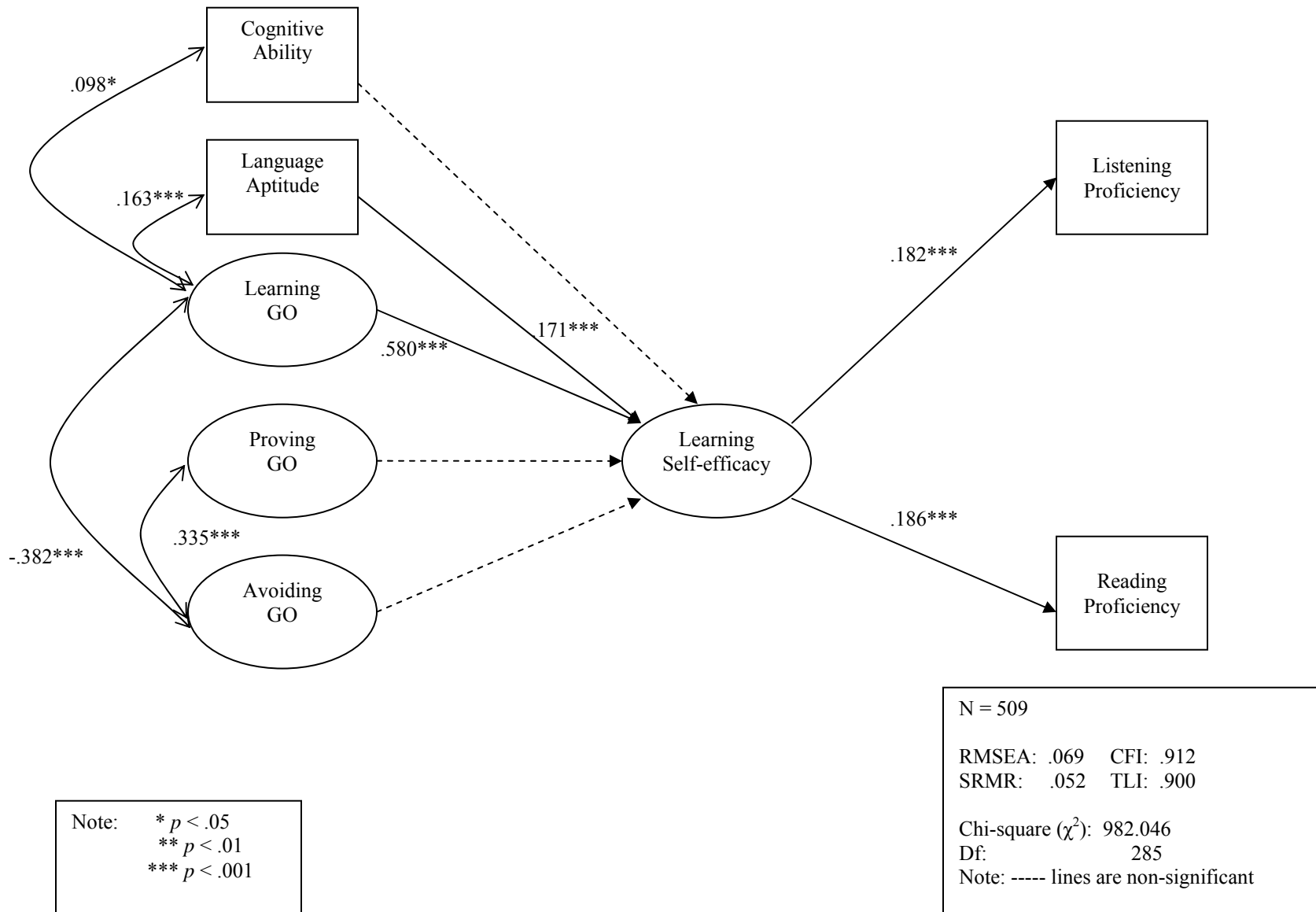
	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Cognitive Ability	79.44	15.46								
2. Language Aptitude	95.63	18.70	.57**							
3. Learning GO	6.28	.64	.10*	.15**	(.90)					
4. Performance-Prove GO	4.42	1.37	.01	-.07	.08	(.89)				
5. Performance-Avoid GO	2.76	1.18	-.08	-.08	-.34	.30**	(.87)			
6. Learning Self-Efficacy	5.87	.72	.07	.20**	.58**	.04	-.29**	(.92)		
7. Listening Proficiency	35.37	5.55	.20**	.18**	.05	-.03	-.01	.14**		
8. Reading Proficiency	39.44	6.12	.25**	.22**	.12**	.00	-.04	.16**	.66**	

Note. Coefficient alphas are in parentheses.

* $p < .05$. ** $p < .01$. Listwise $N = 508$.

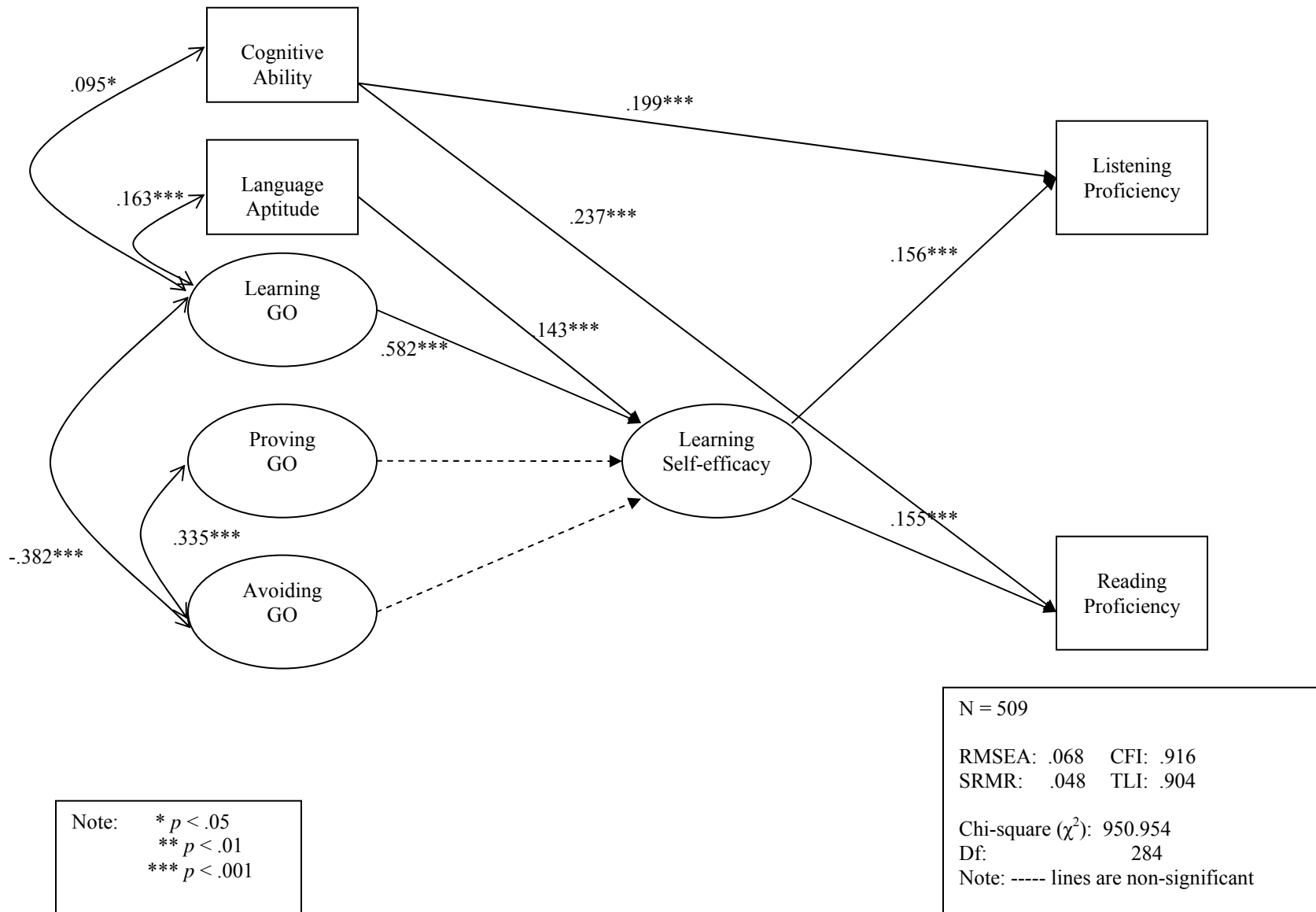
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Figure 1. Base Model for Mediated Model of Goal Orientation, Self-Efficacy and Language Proficiency



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Figure 2. Second Model with Cognitive Ability Added as a Predictor of Language Proficiency



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