CHAPTER 8

INDIVIDUAL ACADEMIC OPTIMISM OF SECONDARY TEACHERS

A New Concept and Its Measure[1]

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ABSTRACT

Academic optimism for secondary teachers is a new construct. In this inquiry the construct was confirmed by using structural equation modeling and confirmatory factor analysis. Researchers now have a valid and reliable tool to explain the connections between academic optimism and student performance, including achievement at both the individual and school levels. At a practical level, school leaders have at least three paths to help teachers become more optimistic and effective in their classroom.

Scholars have had a difficult time identifying school characteristics that make a positive difference in student performance. Educational research

Analyzing School Contexts, pages 209–227

has worked in the shadow of the Coleman Report (Coleman et al, 1966) and its seminal findings that school properties had only a negligible effect on achievement whereas social conditions explained most of the variation in student learning. Recently, however, contemporary research has begun to demonstrate that there are school properties that positively influence student achievement. A new construct, academic optimism, is one such characteristic.

The notion of academic optimism emerges from the research on positive psychology, optimism, social capital, and collective school properties that make a difference in achievement for all students. Hoy, Tarter, and Woolfolk Hoy (2006) first introduced the term as a collective property and critical quality of schools that facilitated the achievement of students; in fact, academic optimism was one of the few organizational attributes that directly influences student achievement when socioeconomic status and previous achievement are controlled (Hoy & Smith, 2007; Hoy et al., 2006; Kirby & DiPaola, 2009: McGuigan & Hoy, 2006).

The basic purpose of this study was to extend the notion of academic optimism to secondary teachers, that is, to conceptualize the concept and confirm its factor validity at the *individual teacher* level in secondary schools. Unlike most concepts in education, this one was initially developed at the organizational level as an important cultural feature of schools rather than as an individual trait of teachers. The shift from academic optimism of the school to that of teachers was first initiated by Hoy and his colleagues at the elementary level (Beard, 2008; Beard, Hoy, & Woolfolk Hoy, 2009; Woolfolk Hoy, Hoy, & Kurz, 2008). The objective of the current investigation is to extend and confirm the structure and measurement of individual teacher academic optimism at the secondary level.

CONCEPTUAL FRAMEWORK

We build upon earlier work at both the collective (Hoy et al., 2006) and individual levels (Beard et al., 2009). Individual academic optimism of secondary teachers is viewed as a construct with similar conceptual underpinnings as its organizational and elementary teacher counterparts. The construct has evolved from the more recent work in positive psychology, which goes beyond the traditional focus on pathology to examine positive aspects of human experience such as optimism, hope, and fulfillment. The theoretical foundations for academic optimism are Bandura's (1986, 1997) self-efficacy theory, Coleman's (1990) social capital theory, Hoy, Tarter, Kottkamp's (1991) study of organizational culture and climate, and Seligman's (1998) research on learned optimism.

Academic Optimism of Schools

Academic optimism of schools emerged as a school variable that has cognitive, affective, and behavioral facets; more specifically, it includes collective efficacy (cognitive), faculty trust (affective), and academic emphasis (behavioral). Collective efficacy is *the perception of teachers in a school that the efforts of the faculty as a whole will have a positive effect on students.* Collective efficacy is a belief or expectation; it is *cognitive.* Faculty trust is anchored in feelings that the students and their parents are benevolent, reliable, competent, honest, and open (Hoy & Tschannen-Moran, 2003). Trust is an *affective* response to the social context. Academic emphasis highlights the ability of students to *learn* and presses for positive academic *behaviors* in schools.

In brief, academic optimism is conceived as a triadic set of interactions with each element functionally dependent on the other (see Figure 8.1). The three facets interact with each other to produce a positive learning environment. The three elements of academic optimism are not only similar in nature and function but also in their potent and positive influence on student achievement; in fact, Hoy and his colleagues (2006) have demonstrated that the three collective properties of schools come together in a unified fashion to create a positive academic environment.

Let us examine the interactions illustrated in Figure 8.1. Faculty trust in parents and students facilitates a sense of collective efficacy in the faculty, and that efficacy in turn reinforces and enhances trust. Likewise, when the faculty trusts parents, teachers can insist on higher levels of academic performance with confidence that parents will not subvert them; moreover, high academic standards in turn promote and enhance faculty trust. Finally, because collective efficacy has a positive influence on performance, academic achievement is emphasized, and academic emphasis in turn reinforces collective efficacy. In sum, the three elements have transactional relations with each other as they interact to form a culture of academic optimism. In sum, the underlying theory of academic optimism gives us a rich

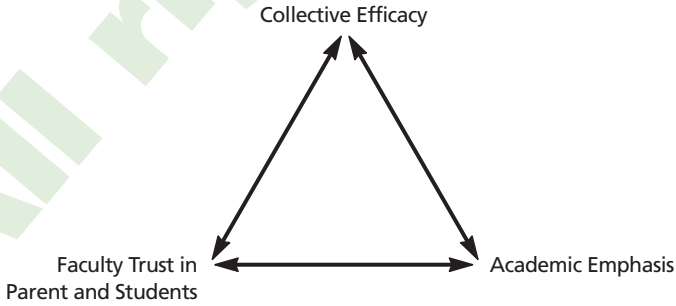

Figure 8.1 Triadic relationship of the elements of academic optimism of schools.

picture of human agency in terms of three complementary perspectives: cognitive, affective, and behavioral.

Before we get to the specific relations to be tested in this research, we define our concepts and their relationships more clearly; hence, we now shift our analysis from the collective of the school to the individual secondary teachers.

Individual Sense of Academic Optimism

Do the three elements of collective academic optimism exist at the individual level? Preliminary evidence suggests an affirmative answer to this query for elementary teachers. The current inquiry of secondary teachers is a companion to earlier research on elementary school teachers, which demonstrated the viability of individual teacher academic optimism (Beard et al., 2009; Woolfolk Hoy et al., 2008). Thus we turn to each of the separate components of academic optimism at the teacher level: sense of teacher trust in parents and students, teacher sense of efficacy, and the academic emphasis of teachers.

Teacher Trust in Parents and Students. Trust is an essential component needed for developing positive relationships; in fact, it behooves even efficacious teachers to form trusting relationships with parents and students. Ralph Waldo Emerson (1841) has noted, "Trust men and they will be true to you; treat them greatly and they will show themselves great" (p. 117). Trust seems to be important in cultivating strong, positive relationships with students. When teachers create a safe and trusting climate, students are more likely to take chances and to learn from their mistakes, which often leads parents to believe that teachers are motivated by the best interests of their children (Adams, Forsyth, & Mitchell, 2009).

A trusting relationship includes feelings of benevolence, reliability, competence, honesty, and openness (Goddard, Tschannen-Moran, & Hoy, 2001). In general, effective teachers seem likely to trust that their students possess an openness to learn and the capability to succeed. Similar to teachers with a high sense of efficacy, teachers who trust students and parents are more likely to set high but achievable expectations for their students (Tschannen-Moran, 2004), a factor that not only promotes but also enables success.

Sense of Teacher Efficacy. Where trust focuses on teacher beliefs toward relationships with students and parents, teacher sense of efficacy emphasizes beliefs about their own ability to be successful in school. A teacher's sense of efficacy is a "judgment of his or her capability to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated" (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). Teacher sense of efficacy is consistently correlated with stu-

dent achievement (Armor et al., 1976; Ashton & Webb, 1986; Ross, 1992; Woolfolk Hoy, Davis, & Pape, 2006). If a teacher believes he or she is able to affect student learning, he or she sets higher expectations, exerts greater effort, and is more resilient when things are difficult (Tschannen-Moran & Hoy, 1998). Not surprisingly, teacher sense of efficacy is consistently and positively related to student achievement.

Teacher Sense of Academic Emphasis. Academic emphasis, also referred to as academic press, is a teacher's ability to emphasize academic tasks over social and affective tasks (Purkey & Smith, 1983; Fisher & Berliner, 1985). Academic learning time for students is essential because the time students spend successfully and actively engaged in an academic task relates positively to student learning (Weinstein & Mignano, 2007). However, students spend only one-third of their hours on academic learning (Woolfolk, 2010). Effective teachers make sure students are "actively engaged in worthwhile, appropriate learning activities" to ensure students' time in school is productive (Woolfolk, 2010, pp. 420–421).

Although teacher trust, teacher sense of efficacy, and teacher academic emphasis make sense as individual variables, the question that we are concerned with is how they fit together. For secondary teachers, do trust, efficacy, and academic emphasis come together to form an individual sense of academic optimism, the dynamics of which we have just sketched?

HYPOTHESES

We turn to the specification of hypotheses guiding the study. The primary hypothesis deals with the nature and measurement of individual sense of academic optimism for secondary teachers. If academic optimism is confirmed at the secondary teacher level, then we will have another important tool to study the relationship between teacher orientation and student performance, one that has a strong theoretical linkage with student achievement.

The Nature of Individual Sense of Academic Optimism for Secondary Teachers

We have theorized that the three basic elements of academic optimism operate in the same way for secondary teachers as they do at the collective level and for elementary teachers; the major hypothesis of this inquiry is:

H.1: *For secondary teachers, trust in parents and students, sense of efficacy, and academic emphasis form a general, latent concept called individual sense of academic optimism.*

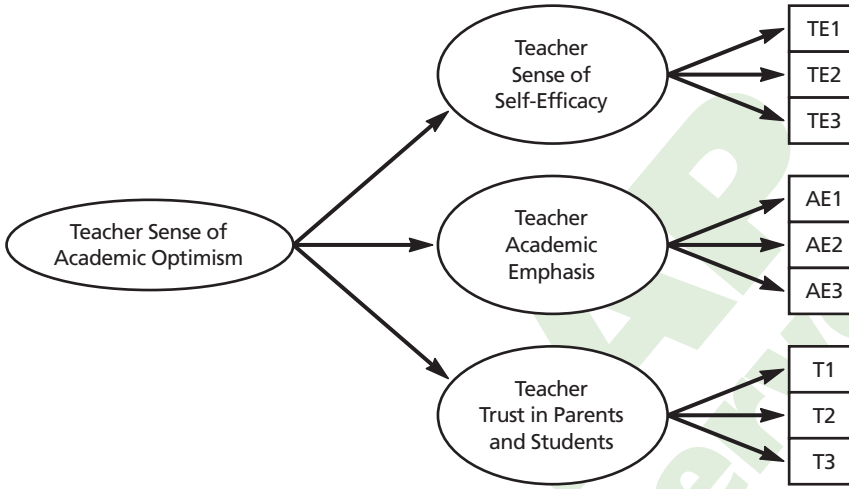

Figure 8.2 Hypothesized model of individual teacher academic optimism.

In other words, we predict that individual sense of academic optimism is a second-order latent factor and we propose to confirm its factor structure using structural equation modeling (SEM). The hypothesis is pictured conceptually as a structural model in Figure 8.2.

General Life Optimism and Academic Optimism

In general, positive psychology is about subjective experiences such as well-being, flow, joy, sensual pleasures, happiness, and the acquisition of knowledge about the future—optimism, hope, and faith (Snyder & Lopez, 2005). For individuals, Seligman (2002) notes that this perspective "... is about positive personal traits—the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future mindedness, high talent and wisdom" (p. 3).

Peterson and Chang (2003) recognized optimism as an inherent feature of all humans defined several ways. Early on, optimism was seen as a "mood or attitude associated with an expectation about the social or material future with which the evaluator regards as socially desirable, to his [or her] advantage or for his [or her] pleasure" (Peterson, 2000, p. 44). Carver and Scheier (2002), however, view optimism as one's positive expectation for the future, and optimists as "people who expect to have positive outcomes, even when things are hard" (p. 233). We find this latter definition of optimism most useful in our research. Optimism is a personal disposition to

believe that one will generally experience good outcomes in life and avoid bad (Scheier & Carver, 1985).

The current study examines the construct of "academic optimism," bringing together teacher beliefs about behaviors, personal factors, and environmental factors that are likely to be positively related to student achievement. A general predisposition to be optimistic does not guarantee academic optimism, but such a predisposition should provide a propensity toward academic optimism—"a teacher's belief that she can make a difference in the academic performance of students by emphasizing academics and learning, by trusting parents and students to cooperate in the process, and by believing in her ability to overcome difficulties and react to failure with resilience and perseverance" (Woolfolk Hoy et al., 2008, pp. 4–5). Hence we theorized that a general disposition to be optimistic should be related positively to the more specific construct of academic optimism:

> **H.2:** *A general disposition to optimism is moderately correlated with academic optimism of teachers.*

This second hypothesis is proposed to provide evidence of predictive validity for our construct of academic optimism.

METHOD

The method section has two parts: first an exploratory study to refine the measures of the concepts of teacher trust, teacher efficacy, and academic emphasis of teachers, and then a second phase to test the primary hypothesis using structural equation modeling to perform a confirmatory factor analysis.

Developing and Refining the Measures

The first challenge of this study was to develop operational measures for each element of academic optimism. Most of the measures in earlier studies were collective measures of trust, efficacy, and academic emphasis at the school level. Only two studies have examined the academic optimism of individual teachers and both were on elementary teachers not secondary ones. Although the three concepts of trust, efficacy, and academic emphasis are conceptually relevant for secondary teachers, measures of the same concepts at the elementary and secondary levels are often a little different. The language and specific activities often vary in elementary compared to secondary schools; for example, academic emphasis may be

expressed differently in high schools than elementary schools (Hoy et al., 1991; Hoy & Sabo, 1998).

The plan to develop a measure of academic optimism of individual secondary teachers was: (1) to start with items that were used to measure the concepts at the elementary school level and (2) to add a like number of items designed to measure the same concepts at the secondary level. We did this for both trust and academic emphasis, but for teacher self-efficacy we used the Teacher Sense of Efficacy Scale (TSES) developed by Tschannen-Moran and Woolfolk Hoy (2001), which has successfully been used to measure teacher sense of efficacy at both levels. Finally, we also were committed to developing a parsimonious instrument with as few items as possible without sacrificing either reliability or validity.

Item Generation

After reviewing the conceptual underpinnings for the two concepts, we independently generated Likert-type items to measure each concept. No item was included unless there was unanimity among all three researchers that the item was a valid indicator of the concept. Nineteen items were identified to measure academic emphasis and teacher trust in parents and students—12 were new items added to those items identified earlier by Beard et al. (2008).

Sample for Exploratory Analysis

To explore the factor structure and reliability of the new measures, a sample of 69 practicing secondary teachers who were taking graduate classes at the University of Texas in San Antonio, University of Alabama, William and Mary, and Ohio State University were asked to respond to the 24 items and the self-efficacy scale. All responses were anonymous and voluntary.

Exploratory Factor Analyses

We had three sets of items: one to measure trust in parents and students, one to measure academic emphasis, and the third was the TSES. A principal axis factor analysis was run first on all the items calling for a three-factor solution with a direct oblimin rotation. The purpose of the analysis was to explore and identify a small set of items to measure reliably each of the hypothesized elements of academic optimism. In our first factor analysis, we were successful in identifying the three strong factors that were expected:

sets of items for trust, efficacy, and academic emphasis of teachers. We selected the three strongest items for each factor. All the pattern and structure loadings for all the factors were greater than .66; in fact, most loadings were greater than .80.

To test further, we did a second principal-axis factor analysis with only the nine selected items—three items for each element—using an oblique solution with direct oblimin rotation. The results were consistent with the first analysis: All items loaded strongly on the expected factor; the three factors explained 72.53% of the total variance; and both the pattern and structure matrices were similar and consistent with our prediction of three strong but related factors. Our goal was to keep the measures of each element short, parsimonious, and reliable. The alpha coefficients for efficacy, trust, and academic emphasis of teachers were .81, .86, and .92, respectively. Thus the measurement of each element was reliable, parsimonious, and valid.

CONFIRMATORY FACTOR ANALYSIS

We now turn to the test of the basic hypothesis of the study using structural equation modeling to test the primary hypothesis of the study—namely, that academic optimism of secondary teachers is a latent second-order construct consisting of teacher trust in students and parents, teacher sense of efficacy, and the academic emphasis of teachers.

Sample

The sample for the hypothesis testing consisted of 131 secondary teachers. In addition to the sample of 69 practicing secondary teachers in the exploratory phase of the study, we added another 62 practicing teachers for a total of 131 secondary teachers. All teachers were taking graduate classes at the University of Texas in San Antonio, University of Alabama, William and Mary, and Ohio State University. Responses were anonymous and voluntary.

Measures

The measures of the component parts of academic optimism were teacher trust in parents and students, teacher sense of efficacy, and the academic emphasis of teachers. The identification and development of the sets of items for each of these elements was described in the exploratory analysis above. We now turn to the specifics and properties of the scales.

Teacher Trust in Parents and Students. Trust was measured using the items identified in our earlier analysis. Three Likert items tapped teacher trust in parents and students. Teachers indicated their agreement with each item from strongly disagree (1) to strongly agree (5). The scale had an alpha coefficient of reliability of .86 for the pilot study and .85 for the final sample and included the following items:

T1. Most of my students are honest.
T2. My student's parents are reliable.
T3. I trust my students.

Teacher Sense of Efficacy Scale. Teacher's self-efficacy beliefs were measured using a short form of the TSES (Tschannen-Moran & Woolfolk Hoy, 2001). The original measured consisted of 12 items, with each measured along a 9-point continuum with anchors at 1 –"nothing," 3 – "very little," 5 – "some influence," 7 – "quite a bit," and 9 – "a great deal"; the higher the score, the greater the teacher's sense of self-efficacy. Our exploratory factor analysis identified an even shorter, reliable scale consisting of three items:

TE1. I can motivate students who show low interest in schoolwork.
TE2. I can get students to believe that they will do well in school.
TE3. I can get students to follow classroom rules.

The alpha coefficient of reliability for the scale was .83 for both samples of this study.

Academic Emphasis of Teachers. Likewise, academic emphasis was measured using the three items identified in our earlier exploratory factor analysis. Teachers indicated their agreement with each item from strongly disagree (1) to strongly agree (5). The scale had had an alpha coefficient of reliability of .92 for the pilot sample and .87 for the final sample and included the following items:

AE1. I press my students to achieve academically.
AE2. I give my students challenging work.
AE3. I set high but attainable goals for my students.

Dispositional Optimism. To test the second hypothesis and check the predictive validity of academic optimism, a measure of dispositional optimism was also needed. Dispositional optimism is the general set of expectations, perceptions, and thoughts and feelings that individuals have in response to life events. Much of the research on dispositional optimism has used the Life Orientation Scale (LOT), which has established reliability and

TABLE 8.1 Means, Standard Deviations, and Reliabilities of Academic Optimism Measures

Items	*N*	Mean	*SD*	Alpha
Trust in Parents and Students				**.87**
"Most of my students are honest."	131	3.52	.956	
"My students' parents are reliable."	131	3.22	.835	
"I trust my students."	131	3.49	.778	
Academic Emphasis				**.83**
"I press my students to achieve academically."	131	4.48	.778	
"I give my students challenging work."	131	4.30	.762	
"I set high but attainable goals for my students."	131	4.51	.727	
Teacher Efficacy				**.85**
"I can motivate my students who show low interest in schoolwork."	131	7.74	1.128	
"I can get students to believe they will do well in school."	131	7.10	1.358	
"I can get students to follow classroom rules."	131	7.74	1.147	

validity (Scheier & Carver, 1985; Terrill, Friedman, Gottschalk, & Haaga, 2002). The latest version of the LOT scale is the short form with six items (Scheier, Carver, & Bridges, 1994). This short version correlates in the .90s with a longer version (Sheier et al., 1994). The short form was used in this research. Each of the items was measured along a 5-point Likert-type scale from 1 ("strongly disagree") to 5 ("strongly agree"). The scale includes the following items:

1. In uncertain times, I usually expect the best.
2. If something can go wrong for me, it will.
3. I'm always optimistic about my future.
4. I hardly ever expect things to go my way.
5. I rarely count on good things happening to me.
6. Overall, I expect more good things to happen to me than bad.

Reliability for the LOT scale has been consistent with an alpha in the .72–.83 range (Carver & Gaines, 1987; Scheier & Carver, 1985; Woolfolk Hoy et al., 2008). In the current study the alpha coefficient was .82 and .84, respectively, for the two samples. Validity of the LOT scale has been supported in a number of studies (Scheier & Carver, 1985; Terrill et al., 2002).

STATISTICAL TESTS OF THE HYPOTHESES

The unit of analysis for this investigation was the individual. To test the primary hypothesis, a confirmatory factor analysis was performed using structural equation modeling.

Test of Hypothesis 1: The Structure and Measure of Individual Academic Optimism

Recall that the basic hypothesis guiding this inquiry proposed that teacher trust in parents and students, teacher sense of efficacy, and academic emphasis of secondary teachers form a general, latent construct: individual sense of academic optimism (see Figure 8.2). The results of our second-order factor analysis strongly support the hypothesis.

All of the goodness-of-fit indices were supportive. The χ^2 (chi-square) test of statistical significance had a value of 29.084 ($p = .215$) with $df = 24$, and the root mean square error of approximation (RMSEA), or standardized measure of χ^2, was 0.0382. The non-normed fit index (NNFI), or Tucker Lewis Index (TLI) as it is often called, was .990. The root mean square residual (RMR) was 0.0442, and the standardized RMR or the SRMR was 0.0422. The Goodness of Fit Index (GFI) was 0.953, and the AGFI was 0.913. Moreover, all of the standardized beta weights were statistically significant. In sum, six of the seven criteria indicated strong support for the hypothesis, with the remaining index not quite as strong but also acceptable (see Table 8.2); hence, the hypothesis was accepted. See Figure 8.3 for a summary of the results of the structure and measure of academic optimism for secondary teachers.

TABLE 8.2 Fit Statistics for the Test of the Academic Optimism Hypothesis

Model fit statistic	Criteria	Model for academic optimism
Chi-square (χ^2) test	Nonsignificance	29.08 ($p = .238$)**
Root mean square error of approximation (RMSEA)	<.05	0.0382**
Non-Normed Fit Index (NNFI) or Tucker Lewis Index (TLI)	>.95	0.990**
Root mean square residual (RMR)	<.05	0.0442**
Standardized RMR (SRMR)	<.05	0.0422**
Goodness of Fit Index (GFI)	>.95	0.953**
Adjusted Goodness of Fit Index (AGFI)	>.95	0.913*

** Excellent fit, * Marginal fit

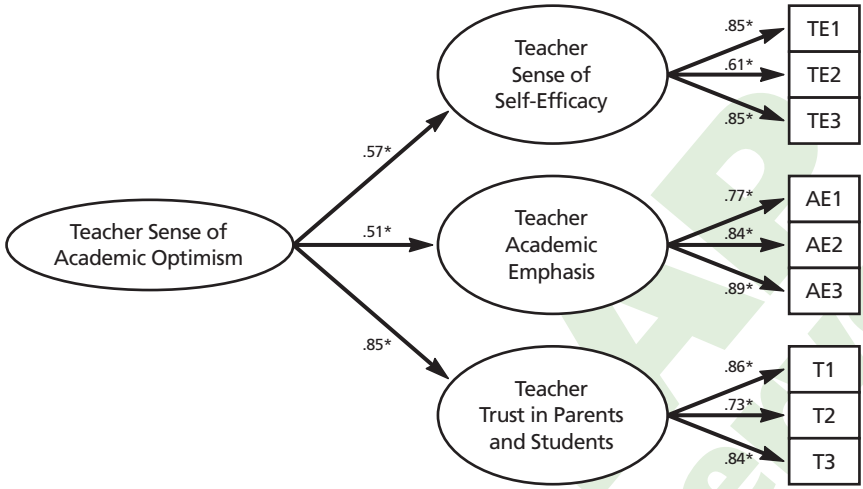

Figure 8.3 Confirmatory factor analysis for individual teacher academic optimism.

Test of Hypothesis 2: General Life Optimism and Academic Optimism

We assumed that a general disposition to be optimistic would have some spillover for the more specific notion of academic optimism; thus, we *hypothesized a positive and moderate relationship between a teacher's general optimism and academic optimism*. To test this relationship, a simple correlation was computed and the results supported the hypothesis. It was found, as predicted, that the greater the teacher's sense of optimism, the stronger the degree of academic optimism ($r = .50$, $p < .01$).

DISCUSSION

Academic optimism of schools is a contemporary construct first identified by Hoy et al. (2006), and it is comprised of the collective properties of academic emphasis, efficacy, and trust in parents and students working together to create a positive academic environment; it is one of the few *organizational* properties that influences student achievement when socioeconomic status and previous achievement are controlled. The construct is a latent collective property of schools that has been used as a measure of school culture (Hoy & Miskel, 2008) and that has been linked to school achievement in a number of studies (Hoy & Smith, 2007; Hoy et al., 2006; McGuigan & Hoy, 2006).

The current study is an extension of earlier work at the school level (Hoy et al., 2006) and more recent work of elementary teachers at the individual level (Beard et al., 2009). The results of this inquiry are consistent with the early research. Academic optimism includes cognitive, affective, and behavioral elements of optimism merging into a single latent construct. Efficacy is a belief, and therefore cognitive. Trust is an affective response, and academic emphasis is the cognitive press for particular behaviors in schools (Woolfolk Hoy et al., 2008). All three elements of academic optimism have transactional relations with one another; they interact and reinforce each other. Like the work at the elementary level, secondary teachers also vary in terms of their academic optimism, which can be measured reliably and validly as was demonstrated by the positive results of the confirmatory factor analysis.

One of the reasons for studying optimism is to consider how people habitually explain the causes of events in their lives. The role of optimism in positive psychology has been recognized as an inherent feature of all humans (Peterson & Chang, 2003). In this inquiry, it was hypothesized that the relationship between academic optimism and general life optimism was positive and significant. Make no mistake, however, a disposition to be optimistic and academic optimism are two different, albeit related, properties. Academic optimism is specific to schools and student performance; in fact, it focuses on the teacher's optimism to make a difference in the learning of students in school. The moderate relationship between academic and general life optimism provided predictive validity for the construct of academic optimism as developed and measured in this study.

CONCLUSION

One of the most important contributions educational researchers can make to education is to identify characteristics of schools and qualities of individual teachers that make a positive difference in academic achievement of students. Socioeconomic status (SES) has always had a strong impact on academic achievement, but unfortunately SES is not very amenable to change. We need to identify factors that go beyond SES to influence student performance and achievement. The search for such variables, especially those that school leaders can influence or that are under the control of individual teachers themselves, has been elusive at best.

One such variable that accounts for academic achievement beyond the socioeconomic status of students and their parents is academic optimism of the school. We believe individual academic optimism of teachers is also a predictor of student success in school. Woolfolk Hoy and her colleagues (2008) were first to explore individual teacher sense of academic optimism.

They argued that academic optimism is a self-referent, positive belief about the capacity to teach all students, to form trusting relationships with parents and students, and to emphasize academic tasks. In other words, academic optimism of teachers is a single latent construct that is reflective of an individual's psychological state, a conclusion that was strongly supported in this research.

The next steps in our research are to link teacher optimism with student learning, which leads to a host of important questions. Consider the following: What do optimistic teachers actually say and do differently from less optimistic teachers? What are the relationships between teacher academic optimism and student engagement, student self-efficacy, student optimism, and student performance and achievement? Usher and Pajares (2008) draw the cogent conclusion that, "Social cognitive theory posits that optimistic individuals are equipped with the self-enhancing bias needed to sustain resilient efficacy beliefs in the face of difficulty" (p. 785). What is the nature of this resilience? What are the antecedents that promote both teacher and collective optimism? Might teacher academic optimism promote student learning, in part, through modeling and social persuasion that encourages *student* academic optimism? Usher and Pajares theorize that:

> Students who believe that an academic outcome is within reach will successfully handle negative experiences because they are certain that the outcome is still attainable. Conversely, students with a realistic appraisal of their academic competencies closely calculate their odds for success and more easily fall victim to setbacks or discouragement, forsaking academic challenges that may well have been within their reach. (p. 785)

Factors related to teachers' academic optimism are likely an amalgam of personal, class, and school-level influences. For example, academic optimism probably affects and is affected by the collective academic optimism of the school; thus, it would be useful to examine both individual and collective variables simultaneously and that would require research designs that make use of hierarchical linear and structural equation modeling. To what extent does collective academic optimism of a school influence teacher academic optimism? And to what extent do both influence student achievement? Optimistic norms reinforce individual tendencies to be optimistic just as a pessimistic faculty can dampen individual teacher optimism. Other school variables are likely related to optimism at both the individual and collective levels. For example, professional learning communities could either support or undermine the development of academic optimism.

Future research also might study teachers in other cultural and geographic settings to determine if the concept of academic optimism is useful in different contexts. The instruments used to assess dispositional optimism in this study have been administered in many different cultural groups, and

some differences identified. For example, in one study, Asian American college students were found to be more pessimistic than Caucasian Americans (Chang, 1996), whereas Ji, Zhang, Usborne, and Guan (2004) found Chinese students in Beijing to be more optimistic than European Canadian students. We urge researchers to use the instruments from this study in a variety of contexts and expect similar results in most industrialized countries, but of course that is an empirical question.

Finally, we now have three paths for leaders to help teachers become more optimistic and effective in the classroom. The first path is to help teachers develop a greater sense of efficacy by placing them in teaching situations where they can be successful and by providing them with models of success. Second, administrators can facilitate teacher trust in parents and students by ensuring that teachers and parents work collaboratively on activities designed to enhance the motivation and learning of students. Finally, principals can build a culture of academic emphasis in which teachers, students, and parents alike are proud of the academic and intellectual activities of the school.

In sum, this research contributes important theoretical and empirical findings for future scholarship in teaching and administration. In particular, the results of the study confirmed and refined academic optimism at the individual level as a measurable construct. We predict that teacher sense of academic optimism may be a force for student achievement just as school academic optimism was found to be at the collective level (Hoy et al., 2006), but that relationship awaits further empirical support.

NOTE

1. This chapter is a refinement of a paper presented at the annual meeting of the University Council for Educational Administration in Anaheim, California (November 2009).

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