

**Academic Optimism of Individual Teachers:
Confirming a New Construct**

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Academic Optimism of Individual Teachers: Confirming a New Construct

Academic optimism is one of the few organizational characteristics of schools that influences student achievement when socioeconomic status and previous achievement are controlled. This construct, a latent collective property of schools, has been linked to school achievement in a number of studies (Hoy & Smith, 2007; Hoy, Tarter, & Woolfolk Hoy, 2006; McGuigan & Hoy, 2006) and also been used as a measure of the culture of schools (Hoy & Miskel, 2008). This new construct, academic optimism, is emerging from the research on positive psychology, optimism, social capital, and collective school properties that make a difference in the achievement for all students. The basic purpose of this study was to extend the notion of academic optimism to individuals, that is, to conceptualize academic optimism and confirm the factor validity of the construct at the *individual teacher* level. The study not only examines the theoretical underpinnings and measurement of teacher academic optimism, but also explores some structural and personal correlates of academic optimism.

Conceptual Framework

Building upon the work at the collective level, individual teacher academic optimism is viewed as a construct similar to its organizational counterpart in its conceptual roots. The construct evolves from the general work on positive psychology, which goes beyond the traditional focus on illness and pathology to look at areas of human experience that include well-being, hope, and fulfillment; that is, academic optimism is rooted in humanist psychology. The theoretical foundations of academic optimism are Bandura's social cognitive and self-efficacy theories (Bandura, 1986,

1997), Coleman's social capital theory (1990), Hoy and his colleagues' work on culture and climate (Hoy, Tarter, Kottkamp, 1991), and Seligman's study (1998) of learned optimism.

Academic Optimism of Schools

Academic optimism of schools is a collective construct that includes the cognitive, affective, and behavioral facets of collective efficacy, faculty trust, and academic emphasis. 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 in students and parents is based on feelings that the students and their parents are *benevolent, reliability, competent, honest, and open* (Hoy & Tschannen-Moran, 2003). Trust is an *affective* response. Academic emphasis is a *focus on learning* and a press for particular *behaviors* in schools. Thus, academic optimism is conceived as a triadic set of interactions with each element functionally dependent on the other (see Figure 1). The three facets interact with each other to produce a positive learning environment. They 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 (Hoy et al., 2006) have demonstrated that the three collective properties of schools come together in a unified fashion to create a positive academic environment.

Let us turn briefly to the interactions depicted in Figure 1. Faculty trust in parents and students encourages a sense of collective efficacy in the faculty, and collective efficacy reinforces and enhances trust. Similarly, when faculties trust parents, teachers can insist on higher academic standards with confidence that parents will not subvert

them, and high academic standards in turn promote and enhance faculty trust. Finally, collective efficacy has a positive influence on achievement: hence, academic achievement is emphasized. Moreover, academic emphasis reinforces collective efficacy. In sum, all three elements have transactional relations with each other as they interact to form a culture of academic optimism. The relationships between the elements of collective academic optimism are summarized in Figure 1.

The research on the academic optimism of schools has been impressive and consistent: the construct is related to school achievement even when controlling for socioeconomic status, previous achievement, and other demographic properties (Hoy & Smith, 2007; Hoy, Tarter, & Hoy, 2006). Does this conceptual perspective on academic optimism translate to the individual level? Before we get to the specific hypotheses of this study, we must define our concepts and their relationships more clearly. In fact, we now shift our orientation from the school to the individual teacher.

Individual Sense of Academic Optimism

The focus of this inquiry is on teacher sense of academic optimism, not collective academic optimism. Is academic optimism a viable construct at the individual level? Is the construct at the teacher level comprised of teacher sense of efficacy, teacher trust, and academic emphasis, similar to the collective components? These are the two major questions that guided this study. We turn to each of the separate components of academic optimism at the teacher level: sense of teacher efficacy, trust in parents and students, and academic emphasis.

Sense of teacher efficacy. Teachers' sense of efficacy is defined as 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). Teachers’ sense of efficacy is one of the only teacher characteristics consistently correlated with student achievement (Armor et al., 1976; Ashton & Webb, 1986; Ross, 1992; Woolfolk Hoy, Davis, & Pape, 2006). If teachers believe they are able to affect student learning, teachers set higher expectations, exert greater effort, and are more resilient when things are difficult (Tschannen-Moran & Hoy, 1998). Thus, it should not be surprising that teacher sense of efficacy is consistently and positively related to student achievement.

Teacher trust in parents and students. In addition to teachers possessing a sense of efficacy, teachers must be able to form trusting relationships with parents and students. Ralph Waldo Emerson (1841) said, “Trust men and they will be true to you; treat them greatly and they will show themselves great” (p.117). Trust is an essential component needed to cultivate and maximize positive relationships among students. When teachers create a safe and trusting environment, students feel comfortable to take chances and learn from their mistakes, and parents come to believe that teachers are motivated by the best interests of their children. When a trusting relationship is created with the teacher, students “show themselves great” and apply themselves to learning.

A trusting relationship includes feelings of benevolence, reliability, competence, honesty and openness (Goddard, Tschannen-Moran, & Hoy, 2001). In general, effective teachers must 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.

Teacher sense of academic emphasis. Only one-third of the hours students spend in schools are devoted to successful learning tasks, known as academic learning time (Woolfolk, 2010). Yet, quality teachers make sure students are “actively engaged in worthwhile, appropriate learning activities” (Woolfolk, 2010, p. 420-421) to ensure students’ time in school is well spent. 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 & Magnano, 2007). Therefore, teachers’ sense of academic emphasis is the degree to which teachers find ways to engage students in appropriate, academic tasks.

Although sense of efficacy, trust, and academic emphasis make sense and have been measured and used separately at the teacher level, the question that we are concerned with is how they fit together. Do they come together to form the construct of individual sense of academic optimism, the dynamics of which we have just sketched? It sounds good in theory, but does it work in practice?

Hypotheses

We turn to the specification of hypotheses guiding the study. The first and primary hypothesis of this inquiry deals with the nature of individual sense of academic optimism. If academic optimism is confirmed at the individual teacher level, then it seems reasonable to predict that the construct will be related to other concepts, especially to those with theoretical linkages. Thus, two secondary hypotheses are proposed to check the predictive validity of the teacher sense of academic optimism.

The Nature of Individual Sense of Academic Optimism

We have theorized that three basic elements of academic optimism operate in the same way at the individual level as they do at the collective level; in fact, the major hypothesis of this inquiry is:

H.1. Teacher's sense of efficacy, trust in parents and students, and academic emphasis form a general, latent concept called individual sense of academic optimism.

We expect 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 2.

Insert Figure 2

General Life Optimism and Academic Optimism

Seligman described positive psychology at the subjective level to be about positive subjective experiences: well-being and satisfaction; flow, joy, sensual pleasures and happiness; and the acquisition of knowledge about the future - optimism, hope and faith (Snyder & Lopez, 2005). At the individual level, he said “it 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 in one of two ways. Optimism earlier defined by Tiger (1979) to be 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) saw optimism to be

one's positive expectation for the future, and optimists as "people who expect to have positive outcomes, even when things are hard" (p. 233). It is this later definition of optimism that we use in this research. As a personal disposition, optimism refers to the tendency to believe that one will generally experience good outcomes in life and avoid bad (Scheier & Carver, 1985).

Optimism has been found to be one general disposition that strongly influences outcomes. The current study examines the construct "academic optimism," bringing together teachers' beliefs about behaviors, personal factors, and environmental factors positively related to student achievement. A personal disposition to be optimism should provide a propensity toward academic optimism – "a teachers 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, Hoy & Kurz, 2008, p. 4-5). We theorized that a general disposition to be optimistic should be related positively to the more specific construct of academic optimism; thus the following hypothesis is proposed.

H.2 Academic optimism of teachers will be moderately correlated to a general disposition to optimism.

Enabling School Structure and Academic Optimism

Hoy and Miskel (2005) described an enabling school structure as a hierarchy that helps rather than hinders and a system of rules and regulations that guides problem solving rather than punishes failure. Contrastingly, a hindering school structure is a hierarchy that impedes with a system of rules and regulations that is coercive. In brief,

enabling school structures describe the extent to which the structure of an organization enables the work of a teacher.

Enabling bureaucracy as a concept relates to the management hierarchy, rules, process, and procedures of the school (Hoy & Sweetland, 2000). This construct is rooted in business organizational research conducted by Adler and Borys (1996). Their research highlighted the features of bureaucracy that enabled organizations to function effectively and those that hindered capable functioning (Adler, 1999; Adler & Borys, 1996). Building on this foundation, Hoy and Sweetland (2000) applied the construct of enabling bureaucracy specifically to schools. They found that enabling bureaucracies in schools manifested themselves through shared authority within established roles, two way communication, seeing problems as opportunities, respecting differences, engendering trust, learning from mistakes and welcoming the unexpected. Enabling bureaucracy as a construct, has also been shown to be associated with trust in the principal, absence of role conflict, truth telling, teacher sense of power, authentic interpersonal relationships among teachers, and open communication between teacher and principal (Hoy & Sweetland, 2001).

With this set of positively related occurrences characteristic of enabling school structures, we theorized a positive association between enabling bureaucracy and academic optimism of teachers. The construct academic optimism at the individual teacher level represents the general confidence the teacher has that conditions exist for students to thrive; hence, we predict:

H.3. Teacher perception of enabling school structure is positively correlated with individual academic optimism.

Exploratory Measurement Studies

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 one of the proposed elements of academic optimism had a valid and reliable individual measure: the Teacher Sense of Efficacy Scale (TSES) developed by Tschannen-Moran and Woolfolk Hoy (2001) was designed and tested for individual teachers.

The other two elements of the proposed construct of individual sense of academic optimism—trust in parents and teachers and academic emphasis—had been measured tentatively by Woolfolk Hoy, Hoy, and Kurz (2008), but both measures needed further empirical support and refinement. For example, the measure of academic emphasis had weak reliability ($\alpha = .60$) in their study. Thus we decided to do a pilot study to improve and refine the individual measures for these two variables.

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 in the pilot unless there was unanimity among all three researchers that the item was a valid indicator of the concept. Twenty-four 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 Woolfolk Hoy, Hoy, and Kurz (2008).

Sample

To test the factor structure and reliability of the new measures, a sample of 72 elementary teachers who were taking educational classes at the University of Texas in

San Antonio, University of Alabama, and Ohio State University were asked to respond to the 24 items. All responses were anonymous and voluntary. The sample was primarily an opportunity sample that we used to examine the factor structure of the concepts and to refine the reliability of the measures.

Exploratory Factor Analyses of the Academic Emphasis and Trust Items

The items were grouped into two sets: one to measure academic emphasis and the other to measure trust in parents and students. Then a principal axis factor analysis was run first on the academic emphasis set of items and then on the trust in parents and student items. The purposes of the analyses were to improve the reliability of the measures, eliminate those items that were not strong indicators of the concept, and select only the items with the highest factor loadings for subsequent analysis. In brief, to make for parsimonious solutions, we established the following criteria for items in each factor analysis:

1. A minimum loading of .50 was required unless there was a strong conceptual reason to include the item.
2. Simple structure was the goal; all items had to have high loadings on one and only one factor.
3. Only the strongest items for each measure were to be used in subsequent analyses.

After several iterations of the factor analyses for each set of items, we found four items in each set that had high loadings (all above .800) and that formed a scale with alpha coefficients of reliabilities about .80. Thus, we had two sets of four items that reliably measured teacher's academic emphasis and a teacher's of trust in parents and

teachers. We were now ready to move forward to test the guiding hypotheses of the study.

Method

The sample, data collection procedures, and measures for the main study are outlined and summarized next.

Sample

The sample for the study consisted of 260 elementary school teachers from 14 schools in central Ohio school districts. These full-time, elementary school teachers came from three settings (rural, urban or suburban) within the state of Ohio. The sample included 58 rural elementary school teachers, 112 suburban elementary school teachers and 90 urban elementary school teachers, all with elementary school licensure. Although the sample in this study was not random, we attempted to select a reasonably representative cross section of elementary schools and teachers from the central Ohio area. The sample population is similar to elementary school teachers in the state of Ohio in terms of gender, age, sex, and years of experience, educational level and type of school district. A comparison of the sample with the population of elementary teacher in Ohio demonstrates the similarity (see Table 1). Teachers responded to the instruments of this study in regularly scheduled faculty meetings. Virtually all teachers (98.8%) at the meetings responded to the questionnaire.

Insert Table 1

Measures

The measures of the component parts of academic optimism were teacher sense of efficacy, teacher trust in parents and students, and the academic emphasis of teachers. Items for these three measures were taken from previous studies.

Teacher sense of efficacy scale (TSES). Teacher's self-efficacy beliefs were measured using a short form of the Teacher Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001). The original measured consisted of 12 items, with each measured along a nine point continuum with anchors at 1 –“nothing,” 3 – “very little,” 5 – “some influence,” 7 – “quite a bit,” 9 – “a great deal”; the higher the score, the greater the teacher's sense of self-efficacy. The items formed three sub-scales for teacher sense of efficacy: one for instructional strategy, one for classroom management and finally one for student engagement. In keeping with our earlier simplification of measures, we performed an exploratory factor analysis and identified three items of the scale, one from each subscale, to measure teacher sense of efficacy. The reliability for the measure was .73 (see Table 2).

Teacher trust in parents and students. Trust was measured using the items identified in our earlier pilot study. Four Likert items tapped teacher trust in parents and students; two items focused on teacher trust in parents and the other two on trust in 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 .79. See Table 2 for the items.

Academic Emphasis. Likewise academic emphasis was measured using the items identified in our earlier exploratory factor analysis to refine and improve the validity of the scale. The resulting four Likert items measured academic emphasis in this research.

Teachers indicated their agreement with each item from strongly disagree (1) to strongly agree (5). The scale had a reliability of .71 (see Table 2).

Dispositional optimism. 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 validity (Scheier & Carver, 1985; Terrill, et al., 2002). The latest version of the LOT scale is the short form with 6 items (Scheier, Carver & Bridges, 1994). This short version correlates in the .90's 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 items include: "In uncertain times, I usually expect the best," "If something can go wrong for me, it will," "I'm always optimistic about my future," "I hardly ever expect things to go my way," "I rarely count on good things happening to me," "Overall, I expect more good things to happen to me than bad."

Reliability for the LOT scale has been consistently in the $\alpha = .72 - .83$ range (Carver & Gaines, 1987; Scheier & Carver, 1985; Woolfolk Hoy, Hoy & Kurz, 2008). In the current study the alpha coefficient was .79. Validity of the LOT scale has been supported in a number of studies (Terrill, et al., 2002).

Enabling school structure. Enabling structure was measured using the Enabling School Structure Scale (ESS) developed by Hoy and Sweetland (2001). The measure indicates the extent to which school structure is perceived as enabling rather than hindering the teaching and learning in the school. A short form of the scale was used in the current study and consists of 12, 5-point Likert items. The responses ranged from 1

(“strongly disagree”) to 5 (“strongly agree”) and include such items as “The administrative hierarchy obstructs student achievement” (score reversed), “In this school red tape is a problem” (score reversed), “Administrative rules help rather than hinder” and “The administrators in this school use their authority to enable teachers to do their job.” The reliability of the ESS has been found to be consistently high with alpha coefficients above .90 (Hoy & Sweetland, 2001; Sweetland & Hoy, 2000), and in the current study the alpha coefficient was .92. Validity of the measure has been supported in several factor analytic studies (Hoy & Sweetland, 2001; Sweetland & Hoy, 2000).

Statistical Tests of the Hypotheses

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

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

Model 1. The three first-order factors of teacher’s sense of efficacy, trust, and academic emphasis were used to define the second-order factor, individual academic optimism of teachers. The first test demonstrated that the data had only marginal support of the proposed model. The goodness of fit indices reported for this analysis (Model 1) include a χ^2 (Chi-Square) test of statistical significance with a value of 126.489 ($p=0.00$) with $df = 41$. The second goodness of fit statistic, Root Mean Square Error of Approximation (RMSEA) or standardized measure of χ^2 , was 0.0917. The non-normed fit index (NNFI), or Tucker Lewis Index (TLI) as it is often called, was .914, which is only marginally acceptable. The Root Mean Square Residual (RMR) was 0.0371, suggesting acceptable fit. The Standardized RMR or the SRMR was 0.0583, which is

slightly above .05 criterion of good fit. The Goodness of Fit Index (GFI) was 0.916, which suggests reasonable fit, but the AGFI was only 0.865, which is below the acceptable standard of good fit. In sum, three of the seven criteria indicated that Model I was a marginal fit for the data. Hence, the modification indices provided by SEM were used to refine the model when they were in keeping with the general theory of the model.

Model II. The modification indices suggested the addition of error covariances for four trust items, two academic emphasis items, and one efficacy item. Then the confirmatory factory analysis was run again letting errors of these items correlate with one another. Each of the items measuring trust was determined by the same respondent so it seemed logical that the errors in the measures would correlate. Likewise, error terms of two academic emphasis items were set to correlate for the same reason. Specifically, “I don’t accept shoddy work from my students” and “I press my students to achieve academically” theoretically measured teacher academic press and high expectation for student performance demonstration; consequently, their errors were set to correlate. “I don’t accept shoddy work from my students” and “How much can you do to get children to follow classroom rules” also were set to correlate because they were measured by the same respondent and both referred to following class rules, for work and for behavior respectively. These items measure the same high level of expectations, one directed at student work habits and the other, at student behavioral habits. The last two items for which the error terms were correlated were “I trust my students” and, “I give my students challenging work”.

The second test provided much better results. All of the factor loadings were significant and the goodness of fit indices were strong. In particular, the goodness of fit

for the second test included a χ^2 (Chi-Square) test score of 38.118 ($p=0.329$) with $df=35$, clearly not significant and therefore indicative of a good model fit. The Root Mean Square Error of Approximation (RMSEA) was 0.0176, which is within the parameters set forth for a good fit. The non-normed fit index (NNFI) was a 0.996, which is high and indicative of good model fit. Likewise the Root Mean Square Residual (RMR) was 0.0219, again indicating a good fit. Similarly, the SRMR demonstrated good fit with a value of 0.0331. Finally, both the Goodness of Fit Index (GFI) and the Adjusted Goodness of Fit Index (AGFI) were 0.974 and 0.951 respectively, offering more evidence of a good fit for Model II. See Table 3 for a comparison of the fit of the models.

Insert Table 3

In summary, with modifications, the second confirmatory analysis yielded an excellent model fit for the data in this study. The major hypothesis of this study was strongly supported. The model with its standardized beta weights is pictorially summarized in Figure 3. As hypothesized academic optimism of individual teachers is a second-order factor composed of trust, efficacy and academic emphasis. Moreover teacher trust in parents and students, teacher sense of self-efficacy, and teacher academic emphasis are first-order factors measured reliably by the items predicted and used to measure each of the concepts. We turn to the two secondary hypotheses of the study, which were tested to add some predictive validity to our measure of individual sense of academic optimism.

Insert Figure 3

Test of Hypothesis 2: General Life Optimism and Academic Optimism

Recall that we assumed that a general disposition to be optimistic would have some spill over 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 ($r = .50, p < .01$).

Test of Hypothesis 3: Enabling School Structures and Academic Optimism

We also expected that school structure might hinder or facilitate the basic work of the school; thus, we predicted that *individual perception of an enabling school structure and academic optimism of teachers were positively related to each other*. To test this relationship, again a simple correlation was computed and the results supported this hypothesis; the more teachers perceived an enabling a school structure, the greater a teacher's degree of academic optimism ($r = .30, p < .01$).

Discussion

Academic optimism of schools is a contemporary construct identified by Hoy, Tarter, and Woolfolk Hoy (2006), which is comprised of the collective properties of academic emphasis, collective efficacy and trust in parents and students working together to create a positive academic environment; it is one of the few *organizational* characteristics 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 which has been linked to school achievement in a number of studies (Hoy & Smith, 2007; Hoy, Tarter, & Woolfolk Hoy, 2006; McGuigan & Hoy, 2006).

The current study, however, explored individual teacher sense of academic optimism. This study built on the work at the school level and directly tested the hypothesis that at the individual level, academic optimism is comprised of a teacher sense of efficacy, teacher trust in parents and students, and academic emphasis of a teacher.

Academic optimism, at both the school and individual levels, includes cognitive, affective, and behavioral components of optimism merging into a single integrated 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, Hoy, & Kurz, 2008). All three elements of academic optimism have transactional relations with one another; they interact and reinforce one another.

The present analysis goes beyond the earlier analysis of individual teacher academic optimism (Woolfolk Hoy et al., 2008) in that each of the composite measures of academic optimism were refined, and then a confirmatory factor analysis of the construct demonstrated that teacher academic optimism was indeed a second-order factor comprised of three first-order factors: teacher sense of efficacy, trust in parents and students, and individual teacher academic emphasis. The findings also support teacher's sense of trust in both parents and students as unified construct; however, teacher trust in parents consistently loaded higher than teacher trust in students, which supported Bryk and Schneider's (2002) claim that teacher-student trust in elementary schools operates primarily through teacher-parent trust. This refinement measure of teacher's individual sense of academic optimism gives researchers a valid and reliable tool to study the antecedents and consequences of teaching and student learning.

Academic optimism is a special set of beliefs only modestly related to an individual's personal disposition toward optimism (Scheier & Carver, 1992). One of the reasons for studying optimism is to consider how people habitually explain the causes of events in their life. The role of optimism in positive psychology has been recognized as an inherent feature of all humans (Peterson & Chang, 2003). Defined in one of two ways, either by mood or attitude (Tiger, 1979), or by expectations for the future (Carver & Scheier, 2002), general optimism as a personal disposition refers to the belief one has relative to their experiences and outcomes.

As was hypothesized, the interrelationship between academic optimism and general life optimism was significant. A general disposition to be optimistic was expected to relate to academic optimism, although academic optimism is a much more specific concept. The moderate relationship between academic and general life optimism provided predictive validity for the construct of academic optimism developed in this study. We further predicted that academic optimism and teacher perception of enabling structure would be positively correlated, and as expected they were, but also as anticipated, the correlation, although statistically significant, was weaker than the general optimism and academic optimism relation.

Conclusion

One of the most important contributions educational researchers can make to the field is to identify properties of schools and qualities of individual teachers that make a real difference in academic achievement of students. Socioeconomic status (SES) always has a strong impact upon academic achievement, but SES is not amenable to significant change by teachers or administrators. We need to identify factors that go beyond SES to

affect 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.

A few characteristics do exist that account for academic achievement beyond the socioeconomic status of students and their parents. As we have seen collective teacher efficacy is one such school property. We believe individual academic optimism of teachers is another. Woolfolk Hoy and her colleagues (Woolfolk Hoy et al., 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.

It is clear that the next steps in research are to link teacher optimism with student learning. 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, and student achievement? As noted by Usher and Pajares (2008), "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 does this resilience look like? What are the antecedents that promote both teacher optimism and student learning? Might teacher academic optimism promote student learning, in part, through modeling and social persuasion that encourages *student* academic optimism?

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. (Usher & Pajares, 2008, p. 785)

This research has focused on the teacher, but the teacher functions in the context of the broader school social system. It is a time of educational change and pressure towards increased standardization of teaching, so as researchers work to conceptualize ways to assess teacher beliefs and dispositions, multiple pressures upon a classroom environment complicate the search. What are the effects of accountability requirements, such as the No Left Child Behind Act in the United States, on collective and individual optimism? In this era of testing and accountability, some schools have more reasons for optimism in the form of higher test scores—perhaps school performance affects individual teacher's optimism. These are only a few research questions generated by the construct of academic optimism.

We expect that the factors related to teachers' academic optimism are an amalgam of personal, class, and school level influences. For example, academic optimism likely both affects and is affected by the collective academic optimism of the school. In the school context, 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? Optimistic norms in a school

should reinforce individual tendencies to be optimistic just as a pessimistic faculty would dampen individual teacher's optimism. Other school characteristics may well be 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. Our refinement of the construct and its measure provide the beginnings for a rich research agenda. The existence of a reliable and valid measure of teacher sense of academic optimism is pivotal in this endeavor. We hope that other researchers join us in the quest to map the antecedents and consequences of academic optimism.

In this quest, it might be informative to identify individuals and schools that demonstrate different levels of academic optimism, and then do case studies to explore other important influences in the development and enactment of academic optimism. Thick, rich descriptions of individual and school academic optimism should enhance our understanding of the construct and provide useful pictures of practice for teachers and administrators. What are the organizational variables that nurture teacher academic optimism? How can the principal's leadership promote academic optimism in teachers?

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 Li-Jun, 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. We expect similar results in most industrialized countries, but of course, that is an empirical question.

This study contributes important theoretical and empirical findings for future scholarship in administration, teacher education, and educational psychology. In particular, the results of the study confirmed and refined academic optimism at the individual level as a measurable construct. 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, Tarter, & Woolfolk Hoy, 2006).

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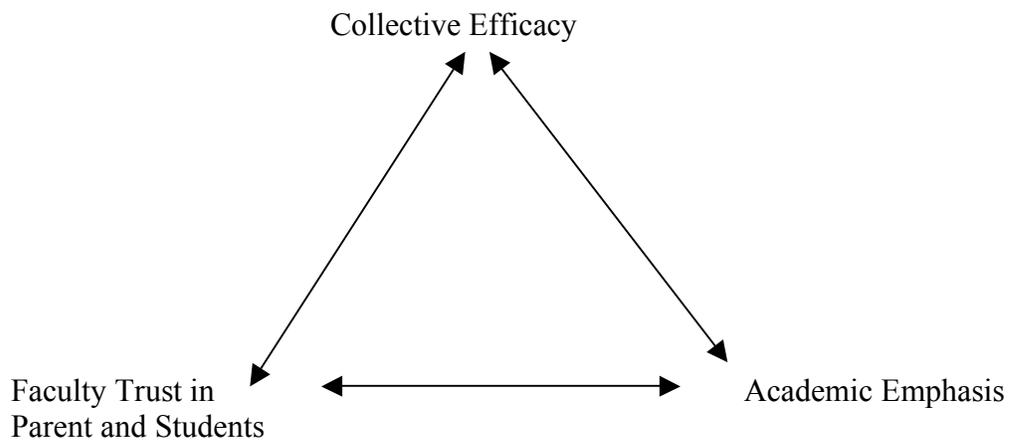


Figure 1: Triadic Relationship of the Elements of Academic Optimism of Schools

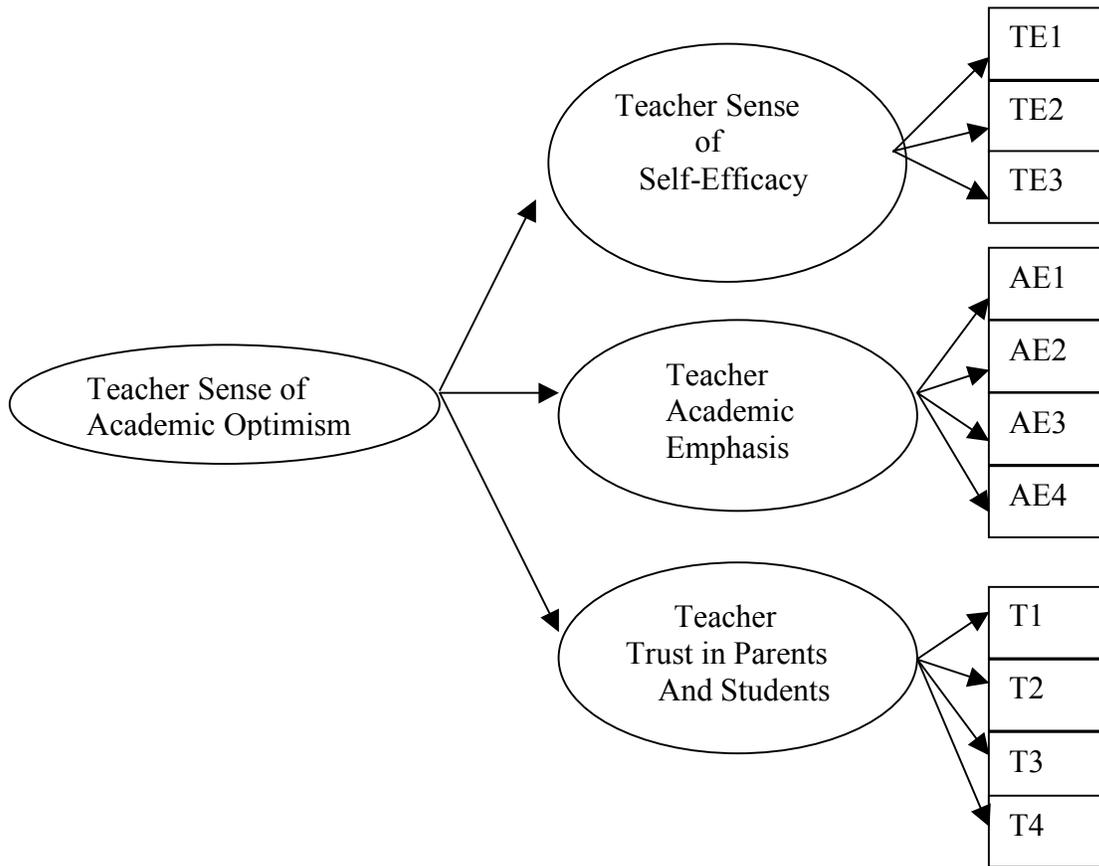
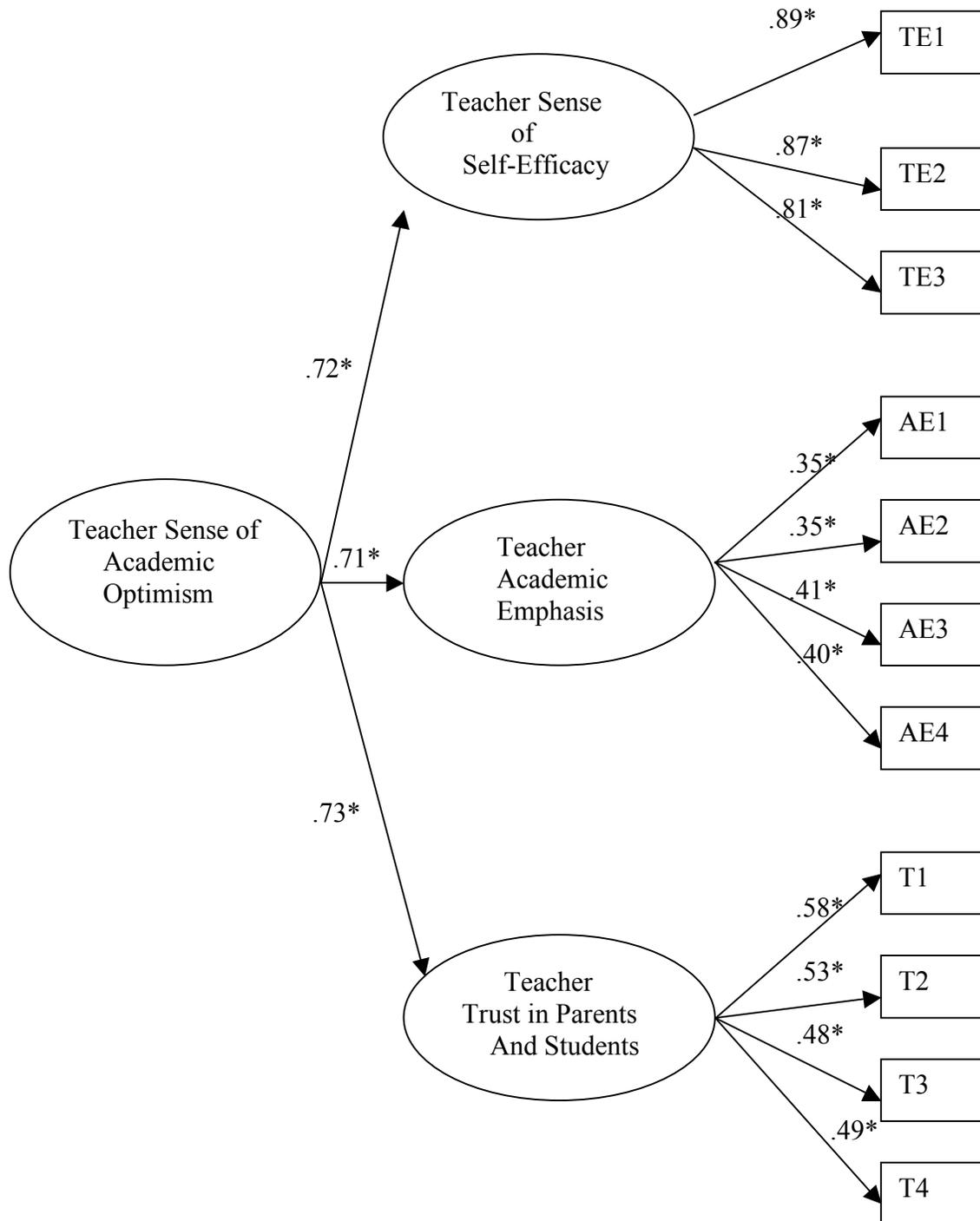


Figure 2: Hypothesized Model of Individual Teacher Academic Optimism



All of the standardized beta weights are statistically significant ($p < .01$)

Figure 3: Confirmatory Factor Analysis for Individual Teacher Academic Optimism

	Sample Profile	ODE Profile
Race		
Caucasian	92.30%	92.19%
Asian	0%	0.30%
African		
American	5.40%	6.67%
Hispanic	1.20%	0.74%
American Indian	0%	0.07%
Multiracial	0.40%	0.03%
Gender		
Female	86.90%	88.87%
Male	11.50%	11.13%
Experience		
1-5 years	17.70%	28.27%
6-10 years	21.50%	20.37%
11-15 years	16.20%	14.66%
16-20 years	13.50%	11.09%
21-25 years	11.90%	9.45%
26+ years	18.50%	16.16%
Education		
Bachelors	36.20%	41.35%
Masters	62.30%	57.85%
Doctorate	0.40%	0.29%

Table 1: Sample Profile comparison to Ohio Department of Education (ODE) Teacher Profile

<u>Items</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>Alpha</u>
1. Academic Emphasis:				.713
“I ask students to explain how they get their answers.”	260	4.49	.624	
“I press my students to achieve academically.”	258	4.54	.599	
“I give my students challenging work.”	258	4.40	.564	
“I don’t accept shoddy work from my students.”	259	4.26	.763	
2. Trust in Parents and Students:				.793
“I trust the parents of my students.”	260	3.54	.889	
“I have confidence in my students.”	259	4.38	.690	
“I can count on parent support.”	259	3.50	.954	
“I trust my students.”	260	4.03	.700	
3. Teacher Efficacy:				.730
“How much can you do to get students to believe they can do well in school work?”	259	7.59	1.125	
“To what extent can you craft good questions for your students?”	257	7.61	1.074	
“How much can you do to get children to follow classroom rules?”	256	7.86	.965	

Table 2: Means, Standard Deviations, and Reliabilities of Academic Optimism Measures

Model fit statistic	Criteria	Model 1	Model 2
Chi-Square (χ^2) test	Non significance	126.489 (p=0.00)	38.118 (p=0.329) **
Root Mean Square Error of Approximation (RMSEA)	<.05	0.0917	0.0176 **
Non-Normed Fit Index (NNFI) or Tucker Lewis Index (TLI)	>.95	0.914 *	0.996 **
Root Mean Square Residual (RMR)	<.05	0.0371 **	0.0219 **
Standardized RMR (SRMR)	<.05	0.0583 *	0.0331 **
Goodness of Fit Index (GFI)	>.95	0.916 *	0.974 **
Adjusted Goodness of Fit Index (AGFI)	>.95	0.865	0.951 **

** Excellent fit *Marginal fit

Table 3: A Comparison of Fit Statistics for the Two Tests of the Academic Optimism