

TEACHER SELF-EFFICACY FOR MORAL EDUCATION

Measuring Teacher Self-Efficacy for Moral Education

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Although instructional self-efficacy has proved to be one of the most powerful teaching beliefs that influence teacher classroom behavior and student outcomes, little is known about teacher self-efficacy for moral education. Self-efficacy for moral education refers to teachers' beliefs that their efforts can bring about improvements in student moral character and behavior. Like instructional self-efficacy, self-efficacy for moral education should also be related to teacher classroom behavior and favorable student outcomes, at least those related to moral development. We constructed a new measure, the Teacher Efficacy for Moral Education measure (TEME) following standard scale developmental procedures. Seventeen items were generated and subjected to factor analysis resulting in a 13-item scale. The items were administered to 76 middle school teachers. TEME demonstrated good validity, correlating with higher scores on attitudes typically held by more successful teachers—efficacy for helping students learn, and efficacy for promoting positive relationships—as well as a related character education efficacy measure. TEME was also correlated with teacher perceptions of school climate. TEME may be a useful measure for use in evaluating the effects of preservice and inservice programs that emphasize fostering moral character in students.

The notion of self-efficacy has been applied to many domains, including teaching. Here we report on a scale measuring a subdomain of teaching that is of increasing importance

today: helping students develop moral character. Self-efficacy describes “people’s judgments of their capabilities to organize and execute courses of action required to attain

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designated types of performances” (Bandura, 1986, p. 391). According to social cognitive theory, from which Bandura’s self-efficacy construct stems, human agency occurs in response to three factors: internal processes (i.e., biological, affective, cognitive), environmental influences, and current and past behavior. Perceived self-efficacy is postulated to be a central internal factor in human affairs and a powerful predictor of behavior and behavioral change (Bandura, 1997). A person’s beliefs about his or her actions can be more powerful motivators than the consequences of those actions (Bandura, 1986). According to social cognitive theory, human behavior “is mediated by our efficaciousness” and “self-efficacy beliefs influence our choices, our effort, our persistence when facing adversity, and our emotions” (Henson, 2001, p. 4). Indeed, in the moral domain, exemplars typically demonstrate high self-efficacy or agency (McAdams, 2009; Walker & Frimer, 2009).

Individuals vary in their self-perceptions by domain (e.g., social, sport, academic; Harter, 1985). Self-efficacy varies by domain as well (Bandura, 1986). One might have high self-efficacy for math or math teaching and low self-efficacy for sport or teaching sports. As a result, education researchers have developed teacher efficacy measures for different domains (e.g., teaching math). This study focuses on the development of a measure to assess perceived self-efficacy in fostering moral character.

Teacher Self-Efficacy

Of the many teacher beliefs and behaviors that have been examined in relation to important student outcomes and effective teaching practice, teaching efficacy has proved to be one of the most powerful. In classrooms with teachers of high instructional self-efficacy, students are more academically motivated (Midgley, Feldlaufer, & Eccles, 1989), more likely to have high self-efficacy themselves (Anderson, Greene, & Loewen, 1988), and more likely to achieve academic success

(Armor et al., 1976; Ashton & Webb, 1986; Moore & Esselman, 1992; Ross, 1992). In other words, students benefit from having teachers with high self-efficacy.

The powerful effects of self-efficacy can be seen in teacher action. Teacher behavior varies with self-efficacy beliefs. Teachers with high instructional self-efficacy spend more time planning and organizing classroom activities (Allinder, 1994); they are more open to new methods and ideas to meet student needs (Berman, McLaughlin, Bass, Pauly, & Zellman, 1977; Guskey, 1988; Stein & Wang, 1988). Teachers with high instructional self-efficacy spend a larger portion of classroom time on academics, providing students with the guidance they need to succeed, and praising students’ accomplishments (Gibson & Dembo, 1984). Teachers with high instructional self-efficacy are more likely to develop classrooms with mastery goal structures, focused on learning and improvement (Wolters & Daugherty, 2007). They view difficult students as reachable, and regard classroom problems as surmountable by inventiveness and extra effort (Ashton & Webb, 1986). In contrast, teachers with low instructional self-efficacy devote more time to nonacademic matters, criticizing students for their failures and giving up on students who do not succeed quickly. Low self-efficacy is related to teachers becoming mired in classroom problems. Teachers with low self-efficacy are more authoritarian, more likely to report higher levels of anger and stress, express pessimistic views of student motivation, and more frequently use extrinsic inducements and negative reinforcement (Melby, 1995; Woolfolk & Hoy, 1990; Woolfolk, Rosoff, & Hoy, 1990).

Teacher self-efficacy is linked to persistence and effort during instruction (Gibson & Dembo, 1984). Because of the complexities in developing student moral character, this same persistence and effort in teachers is required for effective moral character education (Watson, 2003). In fact, teacher self-efficacy is related to a more democratic classroom style and teacher practices that promote cooperation among stu-

dents (Solomon, Watson, & Battistich, 2002). In democratic classrooms, students develop skills for discussion, decision making, social problem solving, and conflict resolution. These kinds of classrooms can lead not only to mastery learning orientations in students, but also to ethical skill development (for reviews, see: Lapsley & Narvaez, 2006; Narvaez, 2006).

Measuring Teacher Self-Efficacy

Measuring teacher self-efficacy has been a difficult challenge. Researchers who study teacher self-efficacy debate how much to distinguish between personal self-efficacy and general self-efficacy. Personal self-efficacy, the respondent's beliefs about him or herself, is based on Bandura's (1977) theory that postulates that the more self-efficacious an individual feels, the more effort is made to succeed (e.g., personal self-efficacy subscale of the Teacher Efficacy Scale; Gibson & Dembo, 1984). General self-efficacy in the teaching domain, also based on Bandura's theory, refers to belief in the power of teachers generally to bring about change in students. It represents outcome expectancy—the degree to which external factors, such as home background, are perceived to be malleable by teacher efforts. Researchers also disagree about the nature of domain specificity and the subcomponents of a domain. For example, Tschannen-Moran and Woolfolk (2001) report on the Teachers' Sense of Teacher Efficacy Scale, which has three subdomain components: efficacy in student engagement, efficacy in instructional practices, and efficacy in classroom management. The choice of subcomponents seems to reflect areas that researchers are most interested in, suggesting that any particular combination of subcomponents may not necessarily measure the construct of self-efficacy in its entirety.

We do not review the controversies further here, except to acknowledge that our approach addresses personal self-efficacy, the respondent's beliefs about the self, in relation to the ability to foster moral character in students. As teacher education programs and inservice

classes move toward a greater emphasis on moral character education (Schwartz, 2008), measures are needed to gauge program effects on teachers. The measure we propose may be useful for such evaluations.

Teacher Self-Efficacy in Moral Development

In order to remedy the lack of teacher self-efficacy measures in the domain of character development, Milson and Mehlig (2002) designed the Character Education Efficacy Belief Instrument (CEEBI), a measure based on the design of the Teacher Efficacy Scale (TES; Gibson & Dembo, 1984). Like the TES, the CEEBI has two subscales, one to measure personal teacher self-efficacy and one to measure general teacher self-efficacy, which is also related to student academic performance (Bandura, 1993). Milson and Mehlig (2002) found that character education self-efficacy—personal or general—was not related to age, degree, grade level or teaching experience. Subsequent work with the CEEBI has not demonstrated great power in predicting teacher behavior and so has not been published. The CEEBI can also be subjected to a critique similar to that raised in the controversy about combining personal and general teacher efficacy constructs and focusing too broadly. Due to these critiques and the general need to differentiate among domains of teaching self-efficacy, we sought to create a narrower, more focused measure of personal self-efficacy for fostering moral character in students.

CURRENT STUDY

As part of a larger study examining middle school teachers, students and classrooms (Narvaez, Turner, Khmelkov, Vaydich, & Mullen, 2007), the Teacher Efficacy for Moral Education scale (TEME) was created to measure teacher beliefs about their capacity to bring about positive change in student moral development. In Phase I, the development of the

TEME followed standard scale development procedures. In Phase II, the items were administered to 76 middle school teachers and a factor analysis was conducted. In Phase III, we compared the resulting scale to an existing self-efficacy instrument to assess its construct validity. We also compared scores on the TEME to other measures of teachers' perceptions of various constructs to examine divergent and convergent validity.

Hypotheses

We expected that TEME would be related to measures of more general instructional self-efficacy as well as to measures of efficacy for character education. We also expected that TEME would be related to school climate measures such as collective self-efficacy and perceptions of school culture.

METHOD

Participants

The instrument was tested on a sample of 76 middle school teachers drawn from public and private schools in the United States (42 females and 29 males, 5 unknown; all Euro-American except for 2 Latinos).

Procedure

Participants were asked to complete a survey packet on their own time and return it to the school office in a sealed envelope. The measures were presented in the same order for each participant. Teachers received a gift certificate for completing and returning the packet.

Measures of Independent Variables

For construct validation purposes, (1) we used two scales tapping instructional efficacy: efficacy for promoting positive relationships, and efficacy for helping students learn; (2) we

used a measure of self-efficacy for promoting character education; and, (3) we used two measures of climate: the school culture scale and a collective efficacy measure.

Instructional Efficacy Measures. The *Teacher Efficacy for Promoting Positive Relationships* is a six-item scale (Turner et al., 2002) that addresses relationships in the classroom in regards to learning. A sample item is "If students in my class seem discouraged about learning, I know how to get them feeling positively again." Participants respond using a Likert-type scale (1 = not at all true, 5 = very true). Cronbach's alpha for this sample was .77. *Efficacy for Helping Students Learn* is a 7-item scale from Turner (Turner et al., 2002). A sample item is "I know how to adjust a lesson to the needs of my students." Participants respond using a Likert-type scale (1 = not at all true, 5 = very true). Cronbach's alpha for this sample was .74.

The *Character Education Efficacy Belief Instrument* (CEEBI, Milson, 2003; Milson & Mehlig, 2002) has 24 items and 2 subscales. The Personal Teacher Efficacy subscale has 12 items (e.g., "I am usually comfortable discussing issues of right and wrong with my students"). The General Teacher Efficacy subscale has 12 items (e.g., "Teachers who encourage responsibility at school can influence students' level of responsibility outside of school"). Participants respond using a Likert-type scale (1 = strongly agree, 5 = strongly disagree). In this sample, Cronbach's alphas were .79 for Personal Efficacy and .80 for General Teacher Efficacy.

Climate Measures. In order to explore the relation between school climate and self-efficacy for moral education, we measured teachers' perceptions of the school climate with the *School Culture Scale* (SCS; Higgins & Sad, 1997). The SCS has 25 items representing four factors: normative expectations (e.g., "There is cutting classes or skipping school"); student-teacher/school relationships (e.g., "Students and teachers trust each other"); student relationships ("Students help each other even if they are not friends"); and

educational opportunities (“Students learn to become more responsible and care for other people”).¹ Participants respond using a Likert-type scale (1 = false, 5 = true). The scale is typically treated as a whole. Cronbach alphas for the SCS typically range from .77 to .85. In this sample, the alpha was .84.

To gauge perception of the schools’ teacher group efficacy, we used a 12-item measure of *collective efficacy* extracted from Goddard (1998). A sample item is “Home life provides so many advantages, the students here are bound to learn.” Participants respond using a Likert-type scale (1 = not at all true, 5 = very true). Cronbach’s alpha for this sample was .74.

Development of the Teacher Self-Efficacy for Moral Education Measure

Phase I: Item development. In Phase I, a pool of 17 items was generated based on the Turner et al. (2002) scales, Teacher Efficacy for Helping Students Learn and Teacher Efficacy for Promoting Positive Relationships (described above). These scales were chosen because they involve both content learning and relationship facilitation, much like moral character instruction. The items were modified for the domain of moral character development (see Table 1) and addressed personal self-efficacy for promoting moral character.

Phase II: Factor analysis. The 17 items were submitted to principle-axis factoring using promax rotation with Kaiser Normalization (see Table 1). Four factors emerged with eigenvalues greater than 1. Together these factors accounted for 68.51% of the variance in participants’ scores. The first factor ($n = 5$) had an eigenvalue of 5.80 and accounted for 34.12% of the variance in participant responses. The second factor ($n = 8$) had an eigenvalue of 3.27 and accounted for 19.25% of the variance in participant responses. The third factor ($n = 3$) and fourth ($n = 1$) factors produced eigenvalues of 1.44 and 1.13, accounting for 8.46% and 6.67% of the vari-

ance in participant responses; the items from these two factors loaded on the other factors and were dropped from further analyses (see Table 1).

Factor analyses conducted after items were excluded produced similar results. Two-factor confirmatory factor analysis was performed next. A scree plot and factor loadings suggested two independent factors could indeed be extracted, which confirmed the existence of two separate factors as indicated by the exploratory factor analysis (see Table 1). Factor one produced an eigenvalue of 5.33, accounting for 40.98% of the variance in participants’ responses. The first factor consisted of 5 items ($\alpha = .92$) and related to how teachers foster a positive environment by doing such things as helping students maintain their motivation and boosting their morale. We named this factor the *Teacher Positivity* subscale. Factor two produced an eigenvalue of 3.01, accounting for 23.15% of the variance in participants’ responses. The second factor consisted of 8 items ($\alpha = .88$) related to the skills and practices that teachers use to help students develop ethical skills. We named this factor, *Instructional Practices*. Together these two factors accounted for 64.14% of the variance in participants’ scores.

The resulting Teacher Self-Efficacy for Moral Education measure (TEME) requires participants to rate 13 items along a 5-point Likert-type continuum (1 = not at all true to 5 = very true). A sample item is “I know how to design lessons that enable all my students to master ethical skills.” Cronbach’s alpha for the sample was .88.

RESULTS

To examine the validity of the Teacher Self-Efficacy for Moral Education measure, we examined the relationships among the TEME and a number of other scales purported to measure similar and different constructs. We examined correlations and conducted regression analyses. All significance tests were

TABLE 1
 Factor Loadings for Teacher Self-Efficacy for
 Moral Education Measure Items Using Promax Rotation With
 Kaiser Normalization for Exploratory Factor Analysis, and for Confirmatory Factor Analysis

<i>Items</i>	<i>Loadings</i>	
	<i>Exploratory</i>	<i>Confirmatory</i>
<i>Factor 1</i>		
I know what to do to keep students feeling good about themselves as moral people.	.95	.90
I know how to promote positive feelings about morality among the students in my class.	.92	.92
If students in my class seem discouraged about being moral people, I know how to get them feeling positively again.	.83	.88
I am good at making all the students in my class feel good about learning to be moral people.	.88	.88
I know how to make students feel good about being moral people.	.78	.82
<i>Factor 2</i>		
When students are having difficulty understanding a moral concept or miniskill, I know what steps to take to help them master it.	.83	.86
I know how to design lessons that enable all my students to master ethical skills.	.81	.83
I know how to create moral lessons that hold my students' interest.	.76	.77
I possess the knowledge and skills necessary to teach moral character development.	.75	.76
If students in my class become distracted from working on moral skills, I know how to get them back on track.	.75	.71
I know how to teach strategies to my students that will help them develop ethical character skills.	.72	.71
I know how to adjust a moral lesson to the needs of my students.	.66	.64
I am good at promoting positive moral relationships among the students in my classes.	.61	.64
<i>Factor 3</i>		
When a student is morally bad, there is not much I can do to change them.	.87	
Sometimes I stop the academic lessons in order to teach a moral lesson.	.57	
Students are born good or bad and there's not much a teacher can do to change them.	.54	
<i>Factor 4</i>		
When students have a conflict, I know how to help them work it out.	.69	

conducted at a .05 level of significance. All tests were two-tailed. See Table 2 for means and standard deviations and Table 3 for correlations.

Relation to Measures of Instructional Efficacy

Convergent validity was supported by positive correlations with two measures typically

related to effective teaching: Efficacy for Promoting Positive Relationships (EPPR; $r = .42$, $p < .001$), and Efficacy for Helping Students Learn (EHSL; $r = .36$, $p = .002$). A closer examination of the TEME's subscales showed that Instructional Practices correlated significantly with the EPPR ($r = .51$, $p < .001$) and with EHSL ($r = .36$, $p = .001$). Teacher Positivity, however, was not significantly correlated with these measures.

TABLE 2
Means and Standard Deviations for Major Variables ($n = 76$)

<i>Variable</i>	<i>Mean</i>	<i>SD</i>
Teacher Efficacy for Moral Education	3.90	.58
Instructional Practices	3.88	.69
Teacher Positivity	3.94	.78
Personal Teacher Efficacy	3.92	.45
General Teacher Efficacy	3.43	.43
Collective Efficacy	4.14	.42
Efficacy for Promoting Positive Relationships	4.20	.50
Efficacy for Helping Students Learn	4.34	.45
School Culture Scale	3.54	.42

TABLE 3
Correlations Among Major Variables ($N = 76$)

	<i>TEME</i>	<i>IP</i>	<i>TP</i>	<i>PTE</i>	<i>GTE</i>	<i>COLL</i>	<i>RELAT</i>	<i>LEARNEFF</i>
Instructional Practices (IP)	0.87**							
Teacher Positivity (TP)	0.71**	0.26*						
Personal Teacher Efficacy (PTE)	0.54**	0.36**	0.52**					
General Teacher Efficacy (GTE)	0.36**	0.20	0.41**	0.61**				
Collective Efficacy (COLL)	0.31**	0.29*	0.18	0.20	0.01			
Relational Efficacy (RELAT)	0.42**	0.51**	0.07	0.24*	0.12	0.49**		
Learn Efficacy (LEARNEFF)	0.36**	0.36**	0.17	0.23*	0.06	0.50**	0.58**	
School Culture	0.44**	0.41**	0.27*	0.33**	0.22	0.41**	0.44**	0.24*
Normative Expectations	0.27*	0.21	0.25*	0.18	0.20	0.02	0.11	-0.07
Student Teacher/School Relationships	0.29*	0.26*	0.18	0.29*	0.12	0.43**	0.39**	0.23*
Student Relationships	0.23*	0.26*	0.08	0.11	0.08	0.38**	0.29*	0.22
Educational Opportunities	0.38**	0.42**	0.14	0.32**	0.16	0.50**	0.53**	0.42**

*Relational Efficacy = Efficacy for Promoting Positive Relationships, Learn Efficacy = Efficacy for Helping Students Learn***

Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Relation to Measure of Self Efficacy for Character Education

The TEME was positively correlated with the two subscales from the Character Education Efficacy Belief Instrument (CEEBI): Personal Teacher Efficacy ($r = .54, p < .001$) and General Teacher Efficacy ($r = .36, p = .002$). TEME subscales were also significantly correlated with CEEBI's subscales. The Teacher Positivity subscale correlated significantly and positively with Personal Teacher Efficacy ($r = .52, p < .001$) and General Teacher Efficacy ($r = .41, p < .001$). The Instructional Practices subscale correlated significantly and positively only with Personal Teacher Efficacy ($r = .36, p = .001$). Although the correlations are only moderate, these findings suggest that the TEME is measuring a construct similar to that measured by the CEEBI, especially its personal efficacy component with which it correlates most highly.

Relation to Climate Variables

Typically, teachers with high personal self-efficacy are more likely to have high collective self-efficacy (e.g., Skaalvik & Skaalvik, 2007). Supporting this notion, the TEME measure was correlated with Collective Efficacy ($r = .31, p = .006$). The Instructional Practices subscale was also correlated with Collective Efficacy ($r = .29, p = .01$), but Teacher Positivity was not.

Additionally, teachers with high self-efficacy for moral education are more likely to create a positive school culture that emphasizes citizenship and good relationships among students and teachers. The TEME was correlated with the School Culture Scale, which measures such things as citizenship and positive relationships among students and teachers ($r = .44, p < .001$). School culture was correlated with both the Instructional Practices subscale ($r = .41, p < .000$) and the Teacher Positivity subscale ($r = .27, p = .02$). The subscales for the School Culture scale also correlated positively and significantly with the

TEME: Normative Expectations ($r = .27, p = .02$), Student-Teacher/School Relationships ($r = .29, p = .01$), Student Relationships ($r = .23, p = .05$), and Educational Opportunities ($r = .38, p = .001$). The TEME subscale Instructional Practices was also positively and significantly correlated with Student Teacher/School Relationships ($r = .26, p = .02$), Student Relationships ($r = .26, p = .03$), and Educational Opportunities ($r = .42, p < .001$). The only subscale correlated with the Teacher Positivity subscale was Normative Expectations ($r = .25, p = .03$). Because of these results, we treated the School Culture Scale as a whole in the regression analyses below.

Multiple Regressions

The various measures of climate and self-efficacy were examined simultaneously to predict scores on the TEME in order to find out which variables had a stronger relation. We conducted regressions on the whole scale and on each subscale. For each scale, three different regression models were compared: model one examined climate predictors (School Culture and Collective Efficacy); model two added instructional efficacy predictors (Efficacy for Promoting Positive Relationships, and Efficacy for Helping Students Learn); and model three added character education predictors (Personal Teacher Efficacy, General Teacher Efficacy). We entered the climate variables first in order to control for possible group-level perception effects. Results are highlighted below. See Table 4 for model fit indices. For regression coefficients by model, see Table 5.

TEME. School Culture and Collective Efficacy were entered as predictors in model 1. Only School Culture significantly predicted scores on the TEME scale ($\beta = .39, p = .002$). In the second model, the instructional efficacy variables were entered as predictors in addition to the climate measures but only School Culture remained a significant predictor ($\beta = .33, p = .01$). Finally, in model 3, the efficacy for character education variables were added. In

TABLE 4
Model Fit Indices for Three Regression Models

Variables	Adjusted R ²	F Change	Sig. F Change	F	p
TEME					
Model 1	.18	9.03	<i>p</i> < .001	9.03	<i>p</i> < .001
Model 2	.22	2.89	<i>p</i> = .06	6.20	<i>p</i> < .001
Model 3	.38	9.21	<i>p</i> < .001	8.20	<i>p</i> < .001
Instructional Practices					
Model 1	.16	7.65	<i>p</i> = .001	7.65	<i>p</i> = .001
Model 2	.27	6.21	<i>p</i> = .003	7.49	<i>p</i> < .001
Model 3					
Teacher Positivity					
Model 1	.05	2.80	<i>p</i> = .07	2.80	<i>p</i> = .07
Model 2	.05	.95	<i>p</i> = .39	1.87	<i>p</i> = .13
Model 3	.28	12.06	<i>p</i> < .001	5.67	<i>p</i> < .001

TABLE 5
Standardized Beta Coefficients for Three Regressions

	TEME			Instructional Practices			Teacher Positivity		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Culture	0.39*	0.33*	0.19	0.36*	0.25*	0.18	0.24	0.28*	0.11
ColEff	0.12	-0.02	-0.01	0.12	-0.06	-0.07	0.07	0.05	0.07
RelateEff		0.17	0.15		0.36*	0.35*		-0.18	-0.21
LearnEff		0.17	0.15		0.11	0.10		0.17	0.15
PTE			0.39*			0.24			0.43*
GTE			0.05			-0.03			0.14

TEME = Teacher Self-Efficacy for Moral Education, CULTURE = School Culture Scale, COLLEFF = Collective Efficacy, RELATEEFF = Efficacy for Promoting Positive Relationships, LEARNEFF = Efficacy for Helping Students Learn, PTE = Character Education Efficacy Instrument, Personal Teaching Efficacy, GTE = Character Education Efficacy Instrument, General Teaching Efficacy.

**p* < .05

this model, School Culture was no longer a significant predictor ($\beta = .19, p = .09$), but Personal Teacher Efficacy from the CEEBI significantly predicted scores on the TEME ($\beta = .39, p = .002$). Model 3 provided the best fit to the data, accounting for approximately 43% of the variance, $R^2 = .43, F(6, 66) = 8.20, p < .001$. The fact that Personal Teacher Efficacy is the strongest predictor of TEME, after accounting for the other predictors, provides strong evidence of construct validity of TEME which is a measure of personal efficacy construct most similar in nature to the one measured by PTE.

Instructional Practices Subscale. In model 1, School Culture was a significant predictor ($\beta = .36, p = .004$). In model 2, the instructional efficacy variables were added. School Culture remained a significant predictor ($\beta = .25, p = .04$) along with Efficacy for Promoting Positive Relationships ($\beta = .36, p = .01$). In model 3, efficacy for character education variables were entered. After accounting for Personal Teacher Efficacy and General Teacher Efficacy in the model, Efficacy for Promoting Positive Relationships remained the only variable that significantly predicted scores

on Instructional Practices ($\beta = .35, p = .01$). Model 2 provided the best fit to the data, $R^2 = .31, F(4, 68) = 7.49, p < .001$. Finally, although model 3 did not improve model fit significantly (F change = 2.12, $p = .13$), it accounted for about 35% of the variance, $R^2 = .35$. These results indicate that the Instructional Practices subscale differs significantly from CEEBI in the nature of the construct that it measures: it is less a measure of generic self-efficacy than it is a measure of efficacy in specific instructional approaches promoting moral character.

Teacher Positivity Subscale. For the Teacher Positivity subscale, neither School Culture nor Collective Efficacy were significant predictors in model 1 (although the coefficient for School Culture had borderline significance, $p = .07$). After adding the instructional efficacy variables in model 2, School Culture significantly predicted scores on Teacher Positivity ($\beta = .28, p = .04$). However, overall, neither model 1 nor model 2 was significant. Efficacy for character education variables were added in model 3. Personal Teacher Efficacy was the only significant predictor in model 3 ($\beta = .43, p = .002$). Model 3 provided the best fit to the data explaining about 34% of the variance, $R^2 = .34, F(2, 66) = 5.67, p < .001$. The Teacher Positivity subscale measures a construct most similar in nature to the one gauged by PTE, therefore, the fact that the relationship between them is the largest ($\beta = .43$), after accounting for all other variables, across the three sets of regression analyses provides further evidence of construct validity of TEME.

DISCUSSION

The present study reports encouraging evidence for the psychometric integrity and construct validity of the Teacher Efficacy for Moral Education measure (TEME) which was developed to measure teachers' personal self-efficacy for fostering moral character in the classroom. Its validity was supported by correlations with several related teacher

self-efficacy instruments, as well as school climate measures. When the TEME subscales were examined separately, each subscale demonstrated a different correlational pattern. The items for the Teacher Positivity subscale related, for instance, to the ability of the teacher to keep morale up among students and for appreciating moral behavior. This subscale seems to reflect more general social skills rather than instructional skills. It was also only correlated with the Educational Opportunities subscale of the School Culture Scale, a subscale that has several relational items (i.e., learning to care about and listen to others and take their perspectives). On the other hand, the Instructional Practice subscale aligns better with the notion of efficacy for fostering moral character through instruction. Given that we made comparisons with other instructional measures, it is not surprising that this subscale had higher correlations with them than the Teacher Positivity subscale. In fact, from a statistical viewpoint, the Instructional Practices subscale frequently performed just as well as, if not better, than the full scale. The regression analyses also support treating the subscales separately. For the full TEME, school culture played a large role in the first two regression models, yet in the third model the variance was explained only by Personal Teacher Efficacy. The Instructional Practice subscale was best explained by model two which addressed relational efficacy. This supports the notion of IP scale being the most distinct new measure which focuses specifically on instructional efficacy for promoting moral character. In contrast, only model three was significant for the Teacher Positivity subscale which was explained primarily by Personal Teacher Efficacy. Thus, TP scale may be closest to the existing PTE scale and, therefore, less useful as a new measure although it may be a more efficient scale, as it only consists of 5 items instead of 12. Theoretically and taking into account this preliminary empirical evidence, it may make sense to treat the two subscales separately rather than sum them together. However, further studies need to be done.

Although it may be clear from prior research that teacher self-efficacy is related to teacher behaviors that improve student outcomes, the link between teacher self-efficacy for moral education and instructional practice needs to be specified. We know quite a bit about what effective instruction looks like for subject areas, such as math, science, and reading, and can relate instructional practice to domain-specific efficacy measures. But in the area of moral character development, there is no consensus on what effective instruction looks like. Generally, democratic classrooms that support student autonomy build a sense of community, and foster academic and social competencies are related to greater gains in moral character variables (e.g., Solomon, Watson, & Battistich, 2002), but little is known about what particular instruction is efficacious. It is still unclear how teacher self-efficacy for moral education is related to specific teacher behaviors, which teacher behaviors actually foster students' moral character and how these factors are related.

Bandura (1997) postulates at least four methods for building self-efficacy. Mastery experiences are the most powerful, but require valued appraisal and simultaneous self-referential feedback. Schools that are professional learning communities may best support such experiences (Fullan, 1993). The other three builders of self-efficacy—social persuasion, vicarious experience, or arousal (emotional or physical)—can either heighten or hamper self-efficacy development, depending on the context (Henson, 2001). Little work has been done on these alternative influences in teacher self-efficacy research. Self-efficacy for moral education may be particularly influenced by social persuasion and vicarious experience, such as colleagues' attitudes towards students and the cultural narratives woven about students. Fostering change in personal self-efficacy is a challenge generally (Gregoire, 2003; Henson, 2001) but it may be even more difficult for moral development in part because preservice teachers typically do not take a class in sociomoral development.

Teacher self-efficacy for moral education may be an especially promising tool for measuring the effects of teacher character education preparation, such as change in efficacy over the duration of a character education intervention. If teacher self-efficacy for moral education is considered a predictor of teaching practices which in turn are expected to affect the moral development of youth, then positive score change might provide initial evidence of program effectiveness. Future work could examine between-teacher (i.e., within school) variation and between-school variation. Such variation might be related to the school climate, although the causal relation might need to be clarified.

Limitations and Future Research

This study has several limitations that may be answered by future research. Most importantly, the TEME needs further validation, in terms of using samples of teachers from different educational levels beyond middle school, and especially in terms of longitudinal and intervention studies. We recommend that future designs include links to student outcomes and to specific teacher behavior. Two methodological issues also should be noted. First, our samples were small and homogeneous. Larger and more diverse samples would verify TEME's generalizability. Second, testing teachers extensively with similar measures may have been problematic, although we had no signs that this was the case. Overall, the measure shows some promise for examining the relations among variables related to teacher belief and behavior in the moral domain.

NOTES

- 1 One item was inadvertently omitted from the Educational Opportunities subscale, specifically, "Students learn how to take other people's points of view."

REFERENCES

- Allinder, R. M. (1994). The relationship between efficacy and the instructional practices of special education teachers and consultants. *Teacher Education and Special Education, 17*, 86-95.
- Anderson, R., Greene, M., & Loewen, P. (1988). Relationships among teachers' and students' thinking skills, sense of efficacy, and student achievement. *Alberta Journal of Educational Research, 34*, 148-165.
- Armor, D., Conroy-Oseguera, P., Cox M., King, N., McDonnell, L., Pascal, A., et al. (1976). *Analysis of the school preferred reading programs in selected Los Angeles minority schools* (REPORT NO. R-2007-LAUDS) (Santa Monica, Rand Corporation) (ERIC Document Reproduction Service No. 130 243).
- Ashton, P. T., & Webb, R. B. (1986) *Making a difference: Teachers' sense of efficacy and student achievement*, New York, Longman.
- Bandura, A. (1977) Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*, Englewood Cliffs, Prentice-Hall.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28*, 117-148.
- Bandura, A. (1996). *Self-efficacy in changing societies*, New York, Cambridge University Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*, New York, W. H. Freeman and Company.
- Berman, P., McLaughlin, M., Bass, G., Pauly, E., & Zellman, G. (1977). *Federal Programs supporting educational change. Vol. VII Factors affecting implementation and continuation* (Report No. R-1589/7-HEW) (Santa Monica, The Rand Corporation) (ERIC Document Reproduction Service No. 140 432).
- Brookover, W., Schweitzer, J., Schneider, C., Beady, C., Flood, P., & Wisenbaker, J. (1978). Elementary school social climate and student achievement. *American Educational Research Journal, 15*, 301-318.
- Forsyth, P. B. & Hoy, W. K. (1978). Isolation and alienation in educational organizations. *Educational Administration Quarterly, 14*, 80-96.
- Fullan, M. (1993). *Change forces: Probing the depths of educational reform*, London, Falmer Press.
- Gibson, S., & Dembo, M. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*, 569-582.
- Goddard, R. D. (1998). *The effects of collective teacher efficacy on student achievement in urban public elementary schools*. Unpublished doctoral dissertation, The Ohio State University, Columbus (University Microforms No. UMI 9911194).
- Gregoire, M. (2003). Is it a challenge or a threat? A dual-process model of teachers' cognition and appraisal processes during conceptual change. *Educational Psychology Review, 15*, 147-179.
- Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education, 4*, 63-69.
- Guskey, T. (1989). Attitude and perceptual change in teachers. *International Journal of Educational Research, 13*, 439-453.
- Guskey, T., & Passaro, P. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal, 31*, 627-643.
- Hall, B., Burley, W., Villeme, M., & Brockmeier, L. (1992, April). *An attempt to explicate teacher efficacy beliefs among first year teachers*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Harter, S. (1985). *The self-perception profile for children: Revision of the perceived competence scale for children* (Manual). Denver, CO: University of Denver.
- Henson, R. K. (2001, January 26). Teacher self-efficacy: *Substantive implications and measurement dilemmas*. Invited keynote address given at the annual meeting of the Educational Research Exchange, Texas A&M University, College Station, Texas.
- Higgins-D'Alessandro, A., & Sad, D. (1997). The dimensions and measurement of school culture: Understanding school culture as the basis for school reform. *International Journal of Educational Research, 27*, 553-569.
- Lapsley, D. K., & Narvaez, D. (2006). *Character education*. In A. Renninger & I. Siegel (Eds.), *Handbook of Child Psychology* (W. Damon & R. Lerner, Series Eds.) (Vol. 4, pp. 248-296). New York: Wiley.

- McAdams, D. (2009). The moral personality. In D. Narvaez & D. K. Lapsley, (Eds.) *Personality, identity, and character: Explorations in moral psychology* (pp. 11-29). New York: Cambridge University Press.
- Midgley, C., Feldlaufer, H., & Eccles, J. (1989). Change in teacher efficacy and student self- and task-related beliefs in mathematics during the transition to junior high school. *Journal of Educational Psychology, 81*, 247-258.
- Milson, A. J. (2003). Teachers' sense of efficacy for the formation of students' character. *Journal of Research in Character Education, 1* (2), 89-106
- Milson, A. J., & Mehlig, L. M. (2002). Elementary school teachers' sense of efficacy for character education. *The Journal of Educational Research, 96*, 477-453.
- Melby, L. C. (1995). *Teacher efficacy and classroom management: A study of teacher cognition, emotion, and strategy usage associated with externalizing student behavior*. Unpublished doctoral dissertation, University of California, Los Angeles.
- Moore, W., & Esselman, M. (1992, April). *Teacher efficacy, power, school climate and achievement: A desegregating district's experience*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Narvaez, D. (2006). Integrative ethical education. In M. Killen & J. Smetana (Eds.), *Handbook of Moral Development*, (pp. 703-733). Mahwah, Erlbaum.
- Narvaez, D., Turner, J., Khmelkov, V., Vaydich, J. L., & Mullen, G. (2007). *Middle school academic and social climate influences on moral character*. Manuscript in preparation.
- Newmann, F. M., Rutter, R. A., & Smith, M. S. (1989). Organizational factors that affect school sense of efficacy, community and expectations. *Sociology of Education, 62*, 221-238.
- Ross, J. A. (1992). Teacher efficacy and the effect of coaching on student achievement. *Canadian Journal of Education, 17*, 51-65.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80*, 1-28.
- Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology, 99*, 611-625.
- Solomon, D., Watson, M., & Battistich, V. (2002). Teaching and schooling effects on moral/prosocial development. In V. Richardson (Ed.), *Handbook of Research on Teaching*, (pp. 566-603). Washington, D.C., American Educational Research Association.
- Stein, M. K., & Wang, M. C. (1988). Teacher development and school improvement: The process of teacher change. *Teaching and Teacher Education, 4*, 171-187.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing and elusive construct. *Teaching and Teacher Education, 17*, 783-805.
- Turner, J. C., Midgley, C., Meyer, D. K., Gheen, M., Anderman, E. A., Kang, J. & Patrick, H. (2002). The Classroom Environment and Students' Reports of Avoidance Strategies in Mathematics: A Multi-Method Study. *Journal of Educational Psychology, 94*, 88-106.
- Walker, L. J., & Frimer, J. (2009). Moral personality exemplified. In D. Narvaez & D. K. Lapsley, (Eds.), *Personality, identity, and character: explorations in moral psychology* (pp. 232-255). New York: Cambridge University Press.
- Watson, M. (2003). *Learning to trust*. San Francisco, Jossey-Bass.
- Wolters, C. A., & Daugherty, S. G. (2007). Goal structures and teachers' sense of efficacy: Their relation and association to teaching experience and academic level. *Journal of Educational Psychology, 88*, 181-193.
- Woolfolk, A. E., & Hoy, W. K. (1990). Prospective teachers' sense of efficacy and beliefs about control. *Journal of Educational Psychology, 82*, 81-91.
- Woolfolk, A. E., Rosoff, B., & Hoy, W. K. (1990). Teachers' sense of efficacy and their beliefs about managing students. *Teaching and Teacher Education, 6*, 137-148.