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Teachers' Sense of Efficacy and Commitment to Teaching

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ABSTRACT. The present study examined the degree to which teachers' sense of efficacy, as well as other hypothesized influences on commitment to teaching, predicted 170 teachers' responses to the question, "Suppose you had it to do all over again: In view of your present knowledge, would you become a teacher?" General and personal efficacy emerged as the two strongest predictors of teaching commitment, along with teacher-student ratio, school climate, and sex. In short, greater teaching commitment tended to be expressed by those teachers who were higher in both general and personal efficacy; who taught in schools with fewer students per teacher; and who worked under a principal regarded positively in the areas of instructional leadership, school advocacy, decision making, and relations with students and staff. Teaching commitment also was higher for female teachers.

DURING THE 1980s and into the current decade, educational researchers have demonstrated a keen interest in the construct of teacher efficacy,¹ or "the extent to which teachers believe they can affect student learning" (Dembo & Gibson, 1985, p. 173). As is the case with such constructs as locus of control and self-efficacy, teacher efficacy refers to one's *beliefs* rather than to observable behaviors.

In the present study, I investigated the relation between teachers' sense of efficacy and their commitment to teaching. The latter variable refers to a teacher's degree of psychological attachment to the teaching profession.

Research on Teacher Efficacy

The Teacher Efficacy Construct

Researchers generally credit Bandura (1977; also see Bandura, 1986, pp. 390-453) for providing the theoretical framework for studying teacher efficacy. In his theory of self-efficacy, Bandura argued that human behavior is influenced by the individual's beliefs regarding two classes of expectations: an *outcome ex-*

pectation, “a person’s estimate that a given behavior will lead to certain outcomes,” and an *efficacy expectation*, the “conviction that one can successfully execute the behavior required to produce the outcome” (Bandura, 1977, p. 193).

Within the context of teaching, for example, an outcome expectation is illustrated by the teacher who believes that skillful instruction can offset the effects of an impoverished home environment. Here, efficacy is expressed not for oneself but, rather, for an abstract collective of teachers—the “normative teacher,” using the language of Denham and Michael (1981, p. 41). An efficacy expectation, in contrast, would be reflected by the teacher’s confidence that he or she personally is capable of such instruction, that the individual possesses personal agency with respect to the task of pedagogy.

Teacher efficacy researchers traditionally have labeled the two sets of beliefs “teaching efficacy” and “personal teaching efficacy” (Ashton & Webb, 1986; Gibson & Dembo, 1984). This language invites confusion, however, given the superordinate construct *teacher efficacy*. Although for somewhat different reasons, Hoy and Woolfolk (1990a) opted to label these constructs “general teaching efficacy” and “personal teaching efficacy,” a distinction that was simplified in this study to “general efficacy” and “personal efficacy.”

However labeled, this distinction is critical “because individuals can believe that a particular course of action will produce certain outcomes, but if they entertain serious doubts about whether they can perform the necessary activities such information does not influence their behavior” (Bandura, 1977, p. 193). Thus, one may be confident in the abilities of the normative teacher and, at the same time, harbor considerable uncertainties about his or her own instructional prowess.

Research on teacher efficacy typically has employed either the two items from the seminal Rand study (Berman & McLaughlin, 1977) or some combination of the 30-item Teacher Efficacy Scale later developed by Gibson and Dembo (1984), probably because both sets of measures bear some semblance to Bandura’s distinction between outcome and efficacy expectations and, therefore, permit the delineation of general and personal efficacy. For example, general efficacy is indicated if a teacher disagrees with the following items:

When it comes right down to it, a teacher really can’t do much because most of a student’s motivation and performance depends on his or her home environment. (first Rand item)

The amount that a student can learn is primarily related to family background. (Gibson and Dembo item)

In contrast, personal efficacy is suggested if one agrees with the following:

If I really try hard, I can get through to even the most difficult or unmotivated students. (second Rand item)

When the grades of my students improve, it is usually because I found more effective teaching approaches. (Gibson and Dembo item)

To be sure, teacher efficacy researchers can choose from other instruments, such as the Responsibility for Student Achievement Questionnaire (Guskey, 1981; also see Guskey, 1987), the Teacher Locus of Control Scale (Rose & Medway, 1981), the Webb Efficacy Scale (Ashton & Webb, 1986), or the Efficacy Vignettes (Ashton & Webb, 1986). Or, following Midgley, Feldlaufer, and Eccles (1988), one can create a hybrid measure from existing instruments. These options notwithstanding, much of what we know—and do not know—about the construct of teacher efficacy and its correlates nonetheless derives from research based on either the Rand items or the Teacher Efficacy Scale.²

Antecedents of Teacher Efficacy

Several studies have examined the effects of preservice teacher education on the formation of prospective teachers' sense of efficacy. Spector (1990) found that personal efficacy among undergraduate students increased linearly during the 4-year undergraduate program, which culminated in student teaching. Perhaps consistent with this finding, Hoy and Woolfolk (1990b) reported that personal efficacy was higher among practicing teachers who had taken extra graduate courses in education.

Spector also found a significant quadratic trend for general, but not personal, efficacy. That is, general efficacy increased linearly for the first 3 years of the undergraduate experience but, unlike personal efficacy, then declined after student teaching. A similar decline in general efficacy was observed by Hoy and Woolfolk (1990a; also see Dembo & Gibson, 1985, p. 178).

Other studies have examined the effects of school context variables on teacher efficacy. For example, Smylie (1988), on the basis of a path analysis, reported that the proportion of low-achieving students in a teacher's classroom had a negative direct effect on personal efficacy. Smylie also found that interactions with one's colleagues about instructional matters carried a positive indirect effect on personal efficacy through the intervening variable *certainty of practice*. And in their study of teacher efficacy and school climate, Hoy and Woolfolk (1990b) found that school-level measures of academic emphasis, institutional integrity, and principal's influence each correlated with either personal or general efficacy. Among special education resource-room teachers, personal efficacy was associated with the perceived utility of instructional supervision (Coladarci & Breton, 1991).

Both personal and general efficacy also have been found to be higher among elementary-level teachers than among high school teachers (Fink, 1988; Parkay, Olejnik, & Proller, 1986). However, it is not yet clear whether this difference can be attributed to a *school* effect or, rather, merely reflects existing differences be-

tween people who select elementary- versus secondary-level teaching. Evans and Tribble (1986), for example, found an analogous difference between elementary- and secondary-level *preservice* teachers.

Consequences of Teacher Efficacy

There is some evidence that teacher efficacy is related to academic achievement and teacher behaviors known to foster academic achievement (Ashton & Webb, 1986; Berman & McLaughlin, 1977; Gibson & Dembo, 1984; Greene, Anderson, & Loewen, 1988; Hoy & Woolfolk, 1990b; Soar & Soar, 1982; also see Ashton, 1984; and Dembo & Gibson, 1985) as well as with important student cognitions such as performance expectancies and appraisals (Midgley et al., 1988) and efficacy for achievement (Greene et al., 1988). More-*efficacious* teachers, relative to their less-*efficacious* peers, also are more likely to adopt change proposals associated with formal innovations and staff development programs (Berman & McLaughlin, 1977; Guskey, 1988; Poole, Okeafor, & Sloan, 1989; Rose & Medway, 1981; Smylie, 1988).

Teacher efficacy has been linked to parent involvement in school activities (Hoover-Dempsey, Bassler, & Brissie, 1987). Hoover-Dempsey et al. found that teacher efficacy, aggregated at the school level, was the strongest or among the strongest predictors of five dimensions of parental involvement. Perhaps consistent with this is the finding that more-*efficacious* teachers, relative to their less-*efficacious* colleagues, are less likely to regard teacher-parent relations as a source of stress (Parkay et al., 1986).

Summary

A teacher's sense of efficacy is emerging as an important variable in research on teaching and deserves the continued attention of investigators in this area of inquiry. Although the correlations tend to be modest—typically ranging from +.10 to +.40—noteworthy is the consistency of findings across different studies and investigators. Yet to be formally examined is the relation between teachers' personal and general efficacy and their commitment to the profession of teaching. The nature of the latter construct and the associated research is briefly described in the next section.

Research on Commitment to Teaching

Commitment to teaching is used here as an indicator of a teacher's psychological attachment to the teaching profession. Defined in this manner, commitment to teaching tends to be examined in one of two ways.

First, teacher attrition is studied. Recent figures, for example, suggest that roughly half of those who enter teaching leave within the first 5 years (Wise, Darling-Hammond, & Berry, 1987, p. 2). Moreover, a disproportionate number of leavers are from such undersupplied disciplines as mathematics and science (Darling-Hammond, 1984). Although there has been some suggestion, based on National Teacher Examination (NTE) scores, that leavers are more likely to be among the academically abler (e.g., Darling-Hammond, 1984), results of a national survey of former and current teachers indicate that the two groups are comparable on several indicators of professional quality (Metropolitan Life, 1985). That is, in addition to having similar education, leavers and stayers are equally likely to have received an "award, citation, or special recognition" for their teaching and to have been asked to serve in a supervisory role over other teachers (Metropolitan Life, 1985, p. 13).

Not surprisingly, low salary is the most frequently reported reason for leaving teaching, cited by 60% of those who actually left the profession (Metropolitan Life, 1985, p. 19). Over one third (36%) of leavers also cite working conditions as a factor in their decisions to leave.

A second way to study commitment to teaching is to ask teachers whether they would choose this profession if they had the decision to make over again. The National Education Association poses a similar question to a sample of American teachers as part of its continuing poll. Although the proportion of teachers reporting they would *not* choose teaching rose from 10% to 36% between 1966 and 1981, this figure had dropped to roughly 30% by 1986 (Darling-Hammond, 1990).

Similar sources of disenchantment are provided by former teachers and those who, although remaining in the teaching force, express reservations about their choice of profession (Metropolitan Life, 1985, p. 17). Frequently cited by both groups are excessive nonteaching responsibilities, large classes, lack of job autonomy and discretion, sense of isolation from colleagues and supervisors, insufficient administrative support, and powerlessness regarding important decision-making processes (e.g., Bird & Little, 1986; Chapman & Hutcheson, 1982; Darling-Hammond, 1984, 1990; McLaughlin, Pfeifer, Swanson-Owens, & Yee, 1986; Metropolitan Life, 1985; Rosenholtz, 1989; also see Lortie, 1975; and Sizer, 1985).

The Present Study

Does teacher efficacy predict commitment to teaching? That is, does a teacher's sense of efficacy relate to whether that teacher expresses reservations about having chosen the teaching profession? Knowing the answer to this question is important for at least two reasons. First, it contributes to the current profile of teachers who are "at risk" of leaving the profession (e.g., Darling-Hammond,

1984). Is it the low- or the high-efficacious teacher who is more disenchanted with teaching and who, perhaps, we are more likely to lose?

Second, if teacher efficacy were to relate positively to teacher commitment, important questions for staff development emerge. For example, how can schools enhance a teacher's sense of efficacy and thereby influence that individual's degree of commitment to teaching?

Despite the plethora of studies both on teacher efficacy and on teacher commitment, the relation between these two considerations remains unexamined. The present study provided the opportunity to address this question. Specifically, personal and general efficacy, along with several other independent variables taken from the literature above, were entered into a regression equation in which commitment to teaching served as the dependent variable.

Method

Subjects

The Maine Department of Education generated a random sample of 364 elementary-level Maine teachers. This sample was representative with respect to geographical region, teacher experience, sex, school size, and grade (K–8).

Instrumentation

Commitment to teaching. The dependent variable, commitment to teaching, was accessed through the question, "Suppose you had it to do all over again: In view of your present knowledge, would you become a teacher?" Higher scores on this 5-point Likert scale reflected a greater likelihood of again selecting teaching as a profession. This measure was comparable to that employed by the National Education Association in its annual poll, as noted above.

Teacher efficacy. Teacher efficacy, the primary independent variable, was assessed with the Gibson and Dembo (1984) instrument, slightly modified to correct for several semantic awkwardnesses (e.g., "he/she"). Further, the two Rand items were substituted for two items on the Gibson and Dembo instrument judged to be equivalent. (The first and second Rand items [see above] replaced Gibson and Dembo's Items 16 and 15, respectively.)

A principal-axis factor analysis resulted in a factor structure consistent with the general/personal efficacy distinction reported by Gibson and Dembo (1984) and later confirmed by other researchers employing this instrument (e.g., Fink, 1988; Spector, 1990; Woolfolk & Hoy, 1990). Twenty-six percent of the total item variance in the present study was accounted for by the two orthogonal factors (Personal Efficacy, 17%; Teaching Efficacy, 9%), a finding that also is congruent with prior factor analyses of this instrument.

A personal efficacy variable was formed by computing an unweighted sum of the eight items that loaded significantly on the personal efficacy factor across five independent investigations: the present study, Fink (1988), Gibson and Dembo (1984), Spector (1990), and Woolfolk and Hoy (1990); a similar procedure resulted in a five-item general efficacy variable. Certain items were recoded so that higher values on the composites corresponded to higher efficacy. The internal-consistency reliability of the two composites were .75 and .55,³ respectively. (Sample items appear in Table 1.)

School climate. Because of the existing evidence regarding the relation between working conditions and one's commitment to teaching, a measure of school climate was administered to teachers in the present study. Two dimensions of school climate were assessed by 30 items adapted from an instrument developed and validated by the Connecticut State Department of Education (Gauthier & Evans, 1983). The first dimension, subsequently confirmed by a principal axis

TABLE 1
Sample Items From the Teacher Efficacy and School-Climate Instruments

<i>Personal efficacy</i>	
When the grades of my students improve, it is usually because I found more effective teaching approaches. (.59)	
If students in my class become disruptive and noisy, I feel assured that I know some techniques to redirect them quickly. (.56)	
If I try really hard, I can get through to even the most difficult or unmotivated students. ^a (.59)	
<hr/>	
<i>General efficacy</i>	
When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on the home environment. ^b (.55)	
The amount that a student can learn is primarily related to family background. (.41)	
The hours in my class have little influence on students compared to the influence of their home environment. (.38)	
<hr/>	
<i>Climate: Principal</i>	
The principal at my school is very active in securing resources to facilitate instruction. (.82)	
The principal talks with us frankly and openly. (.80)	
The principal regularly brings instructional issues to the faculty for discussion. (.77)	
Important decisions are made at this school with representation from students, faculty, and administration. (.64)	
<hr/>	
<i>Climate: Teacher</i>	
Teachers are cooperative and supportive of each other at my school. (.85)	
There is a "we" spirit in this school. (.83)	
Teachers at this school seek better ways of teaching and learning. (.70)	
Teachers at this school feel accountable for student achievement. (.66)	

Note. Factor loadings are presented in parentheses.

^aRand Item 2. ^bRand Item 1.

factor analysis with orthogonal rotation, reflected the school advocacy, decision making, and relations with students and staff (see Table 1); this factor accounted for 45.4% of the total item variance. In contrast, the second dimension, accounting for 11.4% of item variance, reflected teacher collegiality and, to a lesser extent, the instrumental commitment among teachers (see Table 1). Factor scores derived from the first and second factors were used to create, respectively, a "principal" and a "teacher" school-climate composite.

Procedures

In May, the 364 teachers were mailed a questionnaire containing the teacher efficacy and school-climate scales. Given the existing literature on commitment to teaching, as sketched above, additional information was collected regarding *teacher-student ratio*, the total enrollment in a respondent's school divided by the number of teachers in that school; and *salary*, the mean teacher salary in the respondent's school (provided by the state department of education). Also obtained were *teaching experience*, the number of years the respondent had been teaching either in public or private schools; and *sex* (0 = male, 1 = female). After a follow-up mailing in early June, a final return rate of 69% ($N = 252$) was realized.

Analyses

First, descriptive statistics were examined, particularly regarding (a) the distribution of commitment to teaching and (b) the simple correlations between commitment to teaching and the efficacy measures. Second, ordinary least squares multiple regression was carried out to assess the independent effects of personal and general efficacy, as well as the other independent variables, on commitment to teaching. (For all analyses, α was set at .05.)

Results

Descriptive Statistics

Roughly two thirds (65%) of these Maine teachers indicated that they either "certainly" or "probably" would choose teaching, had they the decision to make again. Although arguably high in its own right, this figure also is over twice as large as the comparable percentage (30%) when derived from teachers across the country, as reported above. In contrast, only one fifth of Maine teachers stated that it was unlikely they would choose this profession again, which is *lower* than the comparable figure based on a national sample of teachers. (The Maine figures were identical whether based on the initial sample of 252 teachers or on the final

sample of 170 teachers for whom complete data were available on all independent variables.)

As the simple correlations in Table 2 illustrate, two of the three independent variables that most highly correlated with commitment to teaching were personal efficacy ($r = .25$) and general efficacy ($r = .31$). The third variable, sex, revealed that the average woman's commitment to teaching surpassed that of the average man's ($r = .25$), a correlation corresponding to an effect size of $-.55$. That is, women, on average, were roughly half a standard deviation higher than men on this variable. And when based on the initial, doubtless more representative, sample of 252 teachers, an effect size of $-.67$ was obtained: The average woman in the Maine teaching force was approximately two thirds of a standard deviation higher in commitment to teaching than the average man.

Although small, a significant correlation also was obtained between commitment to teaching and the principal school-climate composite ($r = .16$). Commitment to teaching was uncorrelated with the teacher school-climate composite, teacher-student ratio, mean teacher salary, or teacher experience.

Regression Analyses

To be sure, simple correlations typically are difficult to interpret, insofar as they fail to take into account confounding influences among variables. Consequently, commitment to teaching was regressed on the eight independent variables, and, for each, the standardized partial regression coefficient was examined. This coefficient represents a variable's effect, in standard form, on

TABLE 2
Descriptive Statistics: Means, Standard Deviations, and Intercorrelations ($N = 170$)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Commitment									
(2) Personal efficacy	.25								
(3) General efficacy	.31	.07							
(4) Climate: Principal	.16	.08	.09						
(5) Climate: Principal	.10	.11	.13	.02					
(6) Teacher-student ratio	-.04	.11	.16	.10	.15				
(7) Salary	.06	.08	.04	.09	.11	.03			
(8) Experience	-.01	-.02	.08	.14	.17	.16	.33		
(9) Sex	.25	.26	.21	.00	.16	.21	-.04	-.06	
<i>M</i>	3.79	37.12	18.31	.01	-.01	17.32	18650.35	12.32	.70
<i>SD</i>	1.21	4.94	4.29	.97	.98	3.62	1883.98	7.17	.46

Note. Correlations of .15 or greater were statistically significant ($p < \alpha$).

commitment to teaching when the effects of the remaining independent variables in the equation are held constant.

The regression results (Table 3) were based on the 170 teachers for whom complete data on all variables in the analysis were available. The reduced N , although sufficient for a regression equation of this kind, nonetheless altered the representativeness of the effective sample. This notwithstanding, a multiple correlation of .45 was obtained, indicating that roughly one fifth (21%) of the variance in commitment to teaching was accounted for by the linear combination of personal efficacy, general efficacy, teacher-student ratio, mean teacher salary, teaching experience, sex, and the two school-climate variables, $F(8, 161) = 5.24, p < \alpha$.

Both general and personal efficacy significantly predicted commitment to teaching. Of the eight independent variables, moreover, the two teacher efficacy measures emerged as the two strongest predictors.⁴ Consistent with the simple correlations reported above, commitment to teaching was more highly associated with general efficacy ($\beta = .27$) than with personal efficacy ($\beta = .19$), a difference that was statistically significant. The direction of this difference, which was counter to expectation, is taken up in the discussion below.

Other variables that also significantly predicted commitment to teaching were sex ($\beta = .17$), teacher-student ratio ($\beta = -.16$), and the school-climate factor reflecting the principals' conduct ($\beta = .14$). Thus, there was some tendency for greater teaching commitment to be found among (a) women, (b) teachers employed in schools with fewer students per teacher, and (c) teachers who worked under a principal regarded positively in the areas of instructional leadership, school advocacy, decision making, and relations with students and staff. The three remaining independent variables were unrelated to commitment to teaching.⁵

TABLE 3
Multiple Regression Analysis ($N = 170$)

Variable	b	$SE(b)$	β	t
Personal efficacy	.05	.02	.19	2.54*
General efficacy	.08	.02	.27	3.70*
Climate: Principal	.17	.09	.14	1.89*
Climate: Teacher	.05	.09	.04	.56
Teacher-student ratio	-.05	.02	-.16	-2.13*
Salary	.00	.00	.04	.47
Experience	-.01	.01	-.03	-.43
Sex	.44	.20	.17	2.19*

Note. $R = .45, F(8, 161) = 5.24, p < \alpha$. b is the unstandardized partial slope; β is the standardized equivalent.
* $p < \alpha$ (one-tailed).

Discussion

Before considering the discussion below, one first must acknowledge the limitation of the dependent variable: a hypothetical statement about occupational choice. Although a frequently used and valuable device in its own right, the self-report commitment measure is substantively different from a comparison of current and former teachers. Whether the results obtained here would prevail with alternative measures of commitment can be known only through subsequent research.

Further, although I implicitly and explicitly invoke the language of causality throughout my argument, the data reported above are correlational. Congruence with extant literature notwithstanding, the conclusions offered here will profit considerably from confirmatory studies involving experimental manipulation or, if correlational, greater temporal separation among variables.

School-Level Variables and Teaching Commitment

In part, findings of the present study suggest the continued importance of school-level variables in promoting teachers' professional commitment. Specifically, both teacher-student ratio and the principal's conduct surfaced as significant and independent, if modest, predictors of commitment to teaching: Commitment to teaching tended to be higher (a) among teachers whose schools were characterized by smaller classes and (b) among teachers whose principal was viewed favorably in the areas of instructional leadership, school advocacy, decision making, and relations with students and staff. Both of these features of one's workplace doubtless make for a more enjoyable and rewarding professional experience. The link between these two features and subsequent commitment to teaching is plausible as well as consistent with the observations of others (e.g., Bird & Little, 1986; Chapman & Hutcheson, 1982; Darling-Hammond, 1984, 1990; Lortie, 1975; McLaughlin et al., 1986; Metropolitan Life, 1985; Rosenholtz, 1989; Sizer, 1985).

Curiously, salary was found to be unrelated to commitment to teaching. This perhaps runs counter to what one would expect, given the findings reported from studies of teacher attrition (e.g., Chapman & Hutcheson, 1982; Metropolitan Life, 1985). The low variability for the salary variable, in part, may explain this finding: Low variance constrains covariance. However, it is also important to bear in mind that the present study involved current teachers. That is, for whatever reasons, these teachers had *not* made the decision to leave their profession. Relative to former teachers who eventually changed careers, these teachers probably had accepted the reality of comparatively low salaries—particularly in this region—and, instead, found their rewards in the nonpecuniary aspects of teaching (e.g., Darling-Hammond, 1984; Feiman-Nemser & Floden, 1986).

Teacher Efficacy and Teaching Commitment

The central finding of the present study was that personal and general efficacy were the two strongest predictors of commitment to teaching. This, indeed, is an encouraging outcome for those who study teacher efficacy. And insofar as this outcome suggests a mechanism for fostering teachers' commitment to teaching, this finding similarly is encouraging to those concerned with offsetting teacher attrition. That is, features of school organization that promote a teacher's sense of efficacy may, in turn, promote that teacher's commitment to the organization and, therefore, to teaching (e.g., McLaughlin et al., 1986; Rosenholtz, 1989).

As noted above, the regression weight for general efficacy (.27) was larger than that for personal efficacy (.19), a difference that was both statistically significant and counterintuitive—at least to the present investigator. Although no a priori hypothesis was formulated regarding the differential power of the two efficacy measures to predict commitment to teaching, the tacit expectation was that commitment would be more influenced by one's sense of personal agency than by that individual's appraisal of the normative teacher, especially after other school-level variables were statistically controlled. That is, other things being equal, a greater commitment to teaching would be expected among teachers who believe student achievement can be influenced through skillful instruction, who have confidence in their own ability to influence student achievement, and who assume personal responsibility for the level of student achievement they witness in their classrooms.

Has general efficacy out-predicted personal efficacy in other investigations involving correlates of teacher efficacy? Among studies that permit the separate consideration of general and personal efficacy, the results unfortunately are mixed and, consequently, provide little guidance for interpreting the differential efficacy findings obtained here. Ashton and Webb (1986), for example, found that (a) general efficacy correlated substantially with mathematics achievement but personal efficacy did not, (b) both efficacy measures yielded similar correlations with language achievement, and (c) neither correlated with reading achievement. When the two efficacy measures were correlated with classroom process variables, general efficacy carried 18 significant correlations, compared with 24 for personal efficacy. As Ashton and Webb acknowledged, however, the import of this finding is unclear, insofar as a total of 766 correlations were calculated. And if one employs a significance level of .05 instead of the more liberal criterion of .10 adopted by those researchers, the number of significant correlations drops to 8 for general efficacy and to 10 for personal efficacy.

Parkay et al. (1986), in their study of teacher efficacy and perceived stress, found that general efficacy was more highly correlated with some sources of stress, whereas, for others, the two efficacy measures yielded similar correlations. Hoy and Woolfolk (1990b) reported that (a) both efficacy measures correlated with a school's academic emphasis, (b) general—but not personal—efficacy cor-

related with institutional integrity, and (c) personal—but not general—efficacy correlated with principal's influence. Finally, Green et al. (1987) obtained significant correlations between mean class achievement and personal efficacy, but not general efficacy. (However, this held only for the nine third-grade teachers and when efficacy was assessed at the beginning of the year.)

Thus, findings from existing research on teacher efficacy do little to clarify the greater predictive power of general efficacy that was observed in the present study.⁶ Further compounding the problem are emerging questions regarding just what "general efficacy" is a measure of. Does general efficacy indeed reveal more about teachers' pupil-control ideology, bureaucratic orientation, and fundamental attitudes toward education than about their sense of "outcome expectations" and the "normative teacher" (Hoy & Woolfolk, 1990a; Woolfolk & Hoy, 1990; Woolfolk, Rosoff, & Hoy, 1990)? More research is required to answer this question.

From a measurement perspective, the teacher efficacy literature also would be enriched by more qualitative studies, such as those employing a *think aloud* methodology, in which teachers' thoughts are probed as they respond to teacher efficacy items. Think-aloud studies would throw needed light on the kinds of factors, considerations, standards, and so forth, that teachers invoke as they respond, say, to the following Rand item:

When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment.

In appraising this (general efficacy) proposition, do teachers in fact make reference to "the normative teacher" (Denham & Michael, 1981, p. 41)? If so, in what manner? If not, what recurring thoughts characterize the teachers' deliberations? How do these thoughts differ from those elicited by personal efficacy propositions? Such data would add considerably to our understanding of the two teacher efficacy constructs and, consequently, to our ability to assess the meaning and import of the important antecedents and consequences of a teacher's sense of efficacy.

NOTES

1. In keeping with this literature, *teacher efficacy* and *teachers' sense of efficacy* will be used interchangeably.

2. Although various instruments have been employed to study teacher efficacy, whether each is tapping a common construct remains an open question. See Fink (1988) for an extended discussion of the extant teacher efficacy instruments, the research associated with each of them, and his results regarding their convergent and discriminant validity.

3. The low reliability of the general efficacy measure does not change appreciably when based on all items that loaded on the teaching efficacy factor or, more liberally, on all items having face validity vis-à-vis the teaching efficacy construct. Thus, the reliability of general efficacy is not merely due to the number of items that went into this composite.

4. In an exploratory analysis, the two measures of teacher efficacy were combined as a single composite. When the composite was entered into the regression with the six remaining independent variables, a standardized partial regression coefficient of .33 was obtained; the six other regression coefficients were comparable to the analogous values reported in Table 3.

5. In an exploratory analysis, teaching experience was squared and entered into the regression equation to test for curvilinearity. The coefficient for this term was not statistically significant.

6. Perhaps the unexpectedly higher regression weight for general efficacy is due to the comparatively low reliability of that scale (.55). Whereas bivariate correlations are attenuated by unreliability, the effect of unreliability is much less straightforward in the multivariate case. The effect sometimes will be to attenuate the partial regression coefficient; at other times the effect is just the opposite (e.g., see Berry & Feldman, 1985, pp. 26–37). One can only speculate on which effect is being seen with these particular data.

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