The Influence of Resources and Support on Teachers' Efficacy Beliefs

Megan Tschannen-Moran
College of William and Mary
Anita Woolfolk Hoy
Ohio State University

Megan Tschannen-Moran, Ph. D.
Assistant Professor
The School of Education
College of William and Mary
PO Box 8795
Williamsburg, VA 23187-8795
757-221-2187
MeganTM@aol.com

Anita Woolfolk Hoy, Ph. D.
Professor
College of Education
The Ohio State University
29 West Woodruff Ave.
Columbus, OH 43210
614/488-5064
614/488-5975/Fax
awoolfolk@aol.com

The Influence of Resources and Support on Teachers' Efficacy Beliefs

Compelling evidence has been accumulating over the past quarter century describing the powerful effects of teachers' beliefs about their capability to impact students' motivation and achievement. Teachers' sense of efficacy has been related to student outcomes such as achievement (Ashton & Webb, 1986; Ross, 1992), motivation (Midgley, Feldlaufer, & Eccles, 1989), and students' own sense of efficacy (Anderson, Greene, & Loewen, 1988). In addition, teachers' efficacy beliefs also relate to their behavior in the classroom. For example, efficacy beliefs affect the effort teachers invest in teaching, the goals they set, and their level of aspiration. Teachers with a strong sense of efficacy also tend to exhibit greater levels of planning, organization, and enthusiasm (Allinder, 1994). Additionally, they are more open to new ideas and are more willing to experiment with new methods to better meet the needs of their students (Guskey, 1988, Stein & Wang, 1988). Further, efficacy beliefs influence teachers' persistence when things do not go smoothly and their resilience in the face of setbacks. Greater efficacy also enables teachers to be less critical of students when they make errors (Ashton & Webb, 1986), to work longer with a student who is struggling (Gibson & Dembo, 1984), and to be less inclined to refer a difficult student to special education (Meijer & Foster, 1988; Soodak & Podell, 1993).

Less is known, however, about the kinds of context variables linked to a higher sense of efficacy. The model of teacher efficacy presented by Tschannen-Moran, Woolfolk Hoy, and Hoy (1998) suggests that teachers make efficacy judgments, in part, by assessing the resources and constraints in specific teaching contexts. In addition, resources in the form of feedback and support from colleagues and community members could serve as social persuasion, a source of efficacy information identified by Bandura (1977, 1997). Burley, Hall, Villeme, and Brockmeier (1991) and Hall, Burley, Villeme, and Brockmeier (1992) found that confident new teachers gave higher ratings to the adequacy of support they had received than those who ended their year with a shakier sense of their own competence.

This study assesses one aspect of the Tschannen-Moran et al. model, the extent to which teachers' assessment of key resources and supports in their teaching contexts contributes to their efficacy judgments. Specifically, 255 inservice teachers were sampled to explore the relationship between teachers' sense of efficacy and their rating of the abundance of teaching materials, the interpersonal support from administrators and colleagues, as well as the level of parental and community support. Information about school level (elementary, middle or high school), school context (urban, suburban or rural), and subject-matter specialization were also collected. Finally, teachers were asked to rank their satisfaction with their own professional performance.

Information about the factors that contribute to teachers' sense of efficacy can assist both teacher educators and principals and other practitioners to foster greater levels of teacher efficacy and to reap the benefits in teacher behaviors and student outcomes that have been demonstrated in the literature.

Methodology

The purpose of this study was to explore what kinds of supports seem to matter most in the cultivation of teacher efficacy.

<u>Participants</u>

The participants included 255 inservice teachers, of whom 170 were female, 84 were male, and 1 made no indication. The participants were students at three universities (Ohio State, William and Mary, and Cincinnati) as well as teacher volunteers from two elementary schools, one middle school, and one high school. The teachers had from 1 to 29 years of experience with a mean of 8.2 (SD = 6.8), and ranged in age from 21 to 57 years (mean = 34.8, SD = 9.8). The sample included 215 European Americans, 22 African Americans, 3 Latinos/Latinas, 2 Asian Americans/Pacific Islanders, and 5 who self-identified as "other." Of those who indicated the grade level at which they taught, 31% taught high school, 29% taught middle school, 34% taught elementary grades and 6% taught preschool.

<u>The Measures</u>

All participants completed anonymous surveys that included the Teacher Sense of Efficacy Scale as well as items that assessed perception of support and satisfaction with professional performance.

Teacher Sense of Efficacy Scale. Teachers' sense of efficacy was measured using the Teacher Sense of Efficacy Scale (previously called the *Ohio State Teacher Efficacy Scale,* Tschannen-Moran & Woolfolk Hoy, 2001). This measure consists of 24 items, assessed along a 9-point continuum with anchors at 1 - Nothing, 3 - Very Little, 5 - Some Influence, 7 - Quite A Bit, and 9 - A Great Deal. Previous factor analyses have identified three 8-item subscales: *Efficacy for Instructional Strategies*, *Efficacy for Classroom Management*, and *Efficacy for Student Engagement*. In previous research, reliabilities for the subscales have ranged from .86 to .90 and for the full scale from .92 to .95 (Tschannen-Moran & Woolfolk Hoy, 2001). Sample items include:

> *Efficacy for Instructional Strategies*
> o   To what extent can you provide an alternative explanation or example when students are confused?
> *Efficacy for Classroom Management*
> o   How much can you do to control disruptive behavior in the classroom?
> *Efficacy for Student Engagement*
> o   How much can you do to motivate students who show low interest in schoolwork?

In the current study, principal-axis factoring with varimax rotation yielded the same three subscales as were found in the original study (Tschannen-Moran & Woolfolk Hoy, 2001) with loadings ranging from .44 to .79. Reliabilities for the teacher efficacy subscales were .87 for *Instruction*, .88 for *Management*, and .84 for *Engagement*. An score was computed for each subscale by calculating the mean of the eight responses to the items on that subscale, with results ranging from a mean of 6.66 on *Engagement* to 7.44 on *Management* for the full sample. Intercorrelations between the subscales of *Instruction*, *Management*, and *Engagement* were .61, .57, and .52, respectively (p < .01). Thus the subscales are moderately correlated.

Support. Participants were asked to rate the quality of the support they had received in five areas: teaching resources, interpersonal support provided by the administration of their school, interpersonal support provided by colleagues, parental support and involvement in their classrooms, and community support provided for their classrooms. This measure consisted of five items, assessed along a 9-point continuum with anchors at 1 - Nonexistent, 3 - Poor, 5 - Adequate, 7 - Good, and 9 - Excellent. Sample items include:
•   Rate the teaching resources (materials) provided for you at your school.
•   Rate the interpersonal support provided by your colleagues at your school.
The five items were averaged to calculate a Support Index.

Satisfaction. A final item asked participants to rate their level of satisfaction with their own professional performance for the year along a 9-point continuum with anchors at 1 - Nonexistent, 3 - Poor, 5 - Adequate, 7 - Good, and 9 - Excellent.
•   Rate your satisfaction with your professional performance this year.

Teaching context and teacher demographics. Teachers were asked to indicated the context in which they taught (suburban, urban, or rural) as well as the level at which they taught (preschool, elementary, middle, or high school). They were also given the opportunity to indicate their subject matter specialty, if applicable. In addition, teachers were asked for their gender and the racial or cultural group with which they identified. Finally, teachers were asked their age and years of teaching experience.

Results

For some of the analyses, the participants were divided into Novice Teachers (< 5 years experience) and Experienced Teachers (5 years or more). Means and standard deviation for the support variables for these two groups are presented in Table 1. Perceived support from all sources was moderate for both teacher groups. However, compared to novice teachers, experienced teachers reported significantly higher levels of teaching resources and support from their administration, as well as greater satisfaction with their professional performance.

Table 1
Means and Standard Deviations of Support Variables for Novice and Experienced Teachers

Support Variables	Novice Teachers		Experienced Teachers	
	Mean	S.D.	Mean	S.D.
Teaching Resources	5.98*	2.07	6.52*	1.95
Support from Administration	5.97*	2.18	6.54*	2.13
Support from Colleagues	6.86	1.91	7.00	1.77
Support from Parents	4.84	2.43	5.18	2.15
Support from the Community	4.98	2.17	5.33	2.18
Support Index	5.62*	1.72	6.11*	1.49
Satisfaction with Performance	6.94**	1.60	7.55**	1.11

Note: Scores range from 1 to 9, the higher the score, the greater the perceived support.
* $p<.05$ ** $p<.01$

Next we examined the relationships between teachers' sense of efficacy and support variables for the total sample. Teachers' sense of efficacy was related to the set of support variables (Support Index), although the correlations was weak ($r = .17$, $p<.05$). Efficacy was related most strongly to teaching resources ($r=.23$, $p<.01$). It was weakly related to support from parents ($r=.16$, $p<.05$), but was not related to support from administration ($r = .11$), the community ($r=.15$), or support from colleagues ($r = .05$). See Table 2 for these results. Satisfaction with professional performance was moderately related to Teacher Efficacy ($r=.43$, $p<.01$). [When novice teachers were analyzed separately from experienced teachers, none of the support variables were significantly related to sense of efficacy for experienced teachers and only materials and supplies was for novice teachers ($r = .32$, $p<.01$).]

Table 2
Correlation Analysis of Teacher Sense of Efficacy, Support, and Satisfaction

	2.	3.	4.	5.	6.	7.	8.
1. Teacher Sense of Efficacy	.23**	.11	.05	.16*	.12	.17*	.41**
2. Teaching resources	.	.48**	.36**	.36**	.45**	.72**	.26**
3. Interpersonal support by administration		.	.48**	.39**	.44**	.75**	.27**
4. Interpersonal support from colleagues			.	.32**	.33**	.65**	.23**
5. Parental support and involvement					.73**	.78**	.30**
6. Community support						.81**	.36**
7. Support Index							.38**
8. Personal satisfaction							

In a regression analysis of the set of support variables, only teaching resources made an independent contribution to explaining teachers' sense of efficacy, with just 7% of the variance in teachers' sense of efficacy explained by the support variables.

As shown in Table 3, there were no significant differences in Teacher Efficacy beliefs between groups based on age, gender, race or teaching context. In general, the scores for *Student Engagement* subscale were lower than the means of the other two subscales across all subgroups except preschool teachers. Language Arts teachers were the only subject specialists with significantly higher sense of efficacy, for both overall efficacy and *Student Engagement* ($p<.05$).

Teaching level and years of experience did contribute to significant differences in teachers' sense of efficacy. Elementary teachers had significantly higher overall efficacy than middle school and high school teachers, as well as higher scores on all three subscales. Elementary teachers reported higher mean efficacy for *Student*

Engagement (p<.01) as well as for *Classroom Management* (p<.05), and *Instructional Strategies* (p<.05). Elementary school teachers had higher efficacy for *Instructional Strategies* than preschool teachers (p<.05), whereas preschool teachers had higher efficacy for *Student Engagement* than middle and high school teachers (p<.05). Experienced teachers, those with five or more years of experience, had higher overall sense of efficacy (p<.01), as well as higher scores on the *Classroom Management* and *Instructional Strategies* subscales (p<.01) than novice teachers (defined as those with less than five years experience). However, novice and experienced teachers did not differ significantly in their sense of efficacy for *Student Engagement*.

Table 3
Comparison of Mean Teacher Efficacy among Various Subsamples

Description	N	TSES		TE-CM		TE-IS		TE-SE	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Gender									
Male	84	7.10	.80	7.50	1.00	7.33	.88	6.46	.98
Female	170	7.21	.86	7.41	1.01	7.45	.98	6.76	1.04
Race									
Black	22	7.45	.87	7.70	1.03	7.66	.95	6.98	1.09
White	215	7.13	.82	7.40	1.01	7.35	.94	6.62	1.00
Teaching Experience									
Novice (< 5 years)	102	6.95	.86	7.19	1.13	7.07	.98	6.60	.97
Experienced (5 + years)	153	7.31**	.79	7.60**	.88	7.63**	.86	6.70	1.06
Teaching Context									
Urban	77	7.21	.84	7.53	.97	7.48	.92	6.62	1.13
Suburban	115	7.16	.85	7.43	1.06	7.43	.97	6.62	.98
Rural	44	7.16	.75	7.43	.89	7.40	.77	6.65	.94
Teaching Level									
Preschool (PreK-K)	14	7.11	1.11	7.14	1.60	7.10	1.11	7.11	1.07
Elementary (Grades 1-5)	80	7.47**	.79	7.72*	.89	7.67*	.95	7.02**	.93
Middle School (Grades 6-8)	70	7.03	.80	7.35	.98	7.34	.96	6.40	.94
High School (Grades 9-12)	75	7.01	.83	7.35	1.00	7.31	.88	6.38	1.08
Subject Specialty									
Math	73	7.18	.83	7.56	.94	7.44	.94	6.54	1.06
Science	41	7.16	.90	7.53	1.17	7.32	1.08	6.61	1.02
Language Arts	47	7.39*	.79	7.60	.85	7.64	.89	6.92*	1.01
Social Studies	35	7.02	.93	7.18	1.15	7.39	.91	6.49	1.13
Foreign Language	13	6.90	.79	7.24	.99	7.26	.92	6.18	1.09
Art/Music/Drama	14	6.96	.62	7.17	.79	7.23	.55	6.47	.92
Physical Education	15	7.35	1.01	7.59	1.40	7.58	1.07	6.88	.89
Other	43	7.13	.86	7.39	.98	7.37	.87	6.64	1.07

Note: Efficacy scores range from 1 to 9, the higher the score, the higher the perceived sense of efficacy.
*   p<.05 ** p<.01

Discussion

The findings provide limited support for the Tschannen-Moran et al. (1998) model of teacher efficacy. This model posits that contextual factors, including the supportiveness of other teachers, are a part of the analysis of the task, a component of efficacy judgments. The model further suggests that task analysis will be most explicit for novice teachers and for those entering a new teaching assignment. Experienced teachers are likely to rely more heavily on memories and interpretations of similar past teaching experiences (Gist & Mitchell, 1992). In the current study, teachers, at least novice teachers, seemed to assess elements of the teaching task in making efficacy judgments, although the effect for perceived support in doing the task was not strong. The fact that perceived support was related to efficacy only for novice teachers is consistent the Tschannen-Moran et al. model and with Bandura's theory of self-efficacy suggesting that efficacy may be most malleable early in learning. Thus support in

the first years of teaching could be critical to the development of teacher efficacy (Woolfolk Hoy & Burke-Spero, 2000).

The availability of resources, as well as support from parents were the two elements of support that were related to teachers' sense of efficacy. Because of the traditional isolation of the teaching profession, and the dearth of meaningful feedback from administrators in traditional supervisory practice, perhaps it is not surprising that teachers do not look to these as primary sources to inform their efficacy judgments. Teachers have been forced to cultivate their beliefs of their capability to impact student learning whether support from colleagues or administrators was available or not. Likewise, community support has not traditionally been forthcoming for teachers, whether or not teachers were performing well or poorly, so teachers have evidently not looked there either as a meaningful indicator of their capability to affect student learning.

It is good news that no differences were found in efficacy beliefs based on gender, race, or age as there is nothing in the model to suggest that these factors ought to be related to a teacher's sense of efficacy. It is interesting that teaching context was not related to efficacy beliefs, as, because conventional wisdom assumes that urban teaching environments are more challenging than suburban or rural contexts, and consequently these difficult contexts lower those teachers' sense of efficacy. And yet, it seems that the efficacy beliefs of urban teachers do not differ from those of teachers in other contexts. Perhaps there is a greater recognition of the challenges of teaching regardless of context in the light of higher standards, but also recognition of greater knowledge of successful teaching strategies than there has been in the past.

Differences were found, however, with respect to the school level. Elementary teachers had the highest overall sense of efficacy among elementary, middle, and high school teachers. The strength of these efficacy beliefs was sustained across all three subscales. Elementary teachers were more confident in their capabilities to manage classroom behavior effectively than those who taught older students. The younger were the students being taught, the greater the efficacy to engage both very capable and struggling students, with elementary and preschool teachers demonstrating higher efficacy for *Student Engagement*. And elementary teachers had the greatest confidence across all levels that they knew and were able to implement appropriate *Instructional Strategies*. Language arts teachers as a group seemed to have a stronger overall sense of efficacy, as well as the sense that they were successfully able to engage students.

Career stage also made a difference in teachers' sense of efficacy beliefs. Experienced teachers had higher efficacy than novice teachers with less than five years of teaching experience. Experienced teachers have had the time to develop and hone their skills in *Classroom Management* and to cultivate effective *Instructional Strategies*. It is also possible that many teachers who feel the least efficacious leave the profession before teaching for five years. In the United States, up to 25% of beginning teachers do not return for their third year and almost 40% leave the profession within the first five years of teaching (Gold, 1996; Harris & Associates, 1993). There is evidence that those who leave teaching have significantly lower scores on measures of teacher self-efficacy than teachers who remain in teaching (Glickman & Tamashiro, 1982). Indeed, teacher self-efficacy has been linked to level of professional commitment for elementary school, middle school, and preservice teachers (Coladarci, 1992; Evans & Tribble, 1986), and to level of stress experienced in teaching (Smylie, 1988).

It is interesting, however, that there were no differences between novice and experienced teachers in efficacy for *Student Engagement*. The field of teaching has only recently begun to focus on the importance of *Student Engagement* and to develop strategies to cultivate it. In the absence of any core technology, perhaps is has been left to teachers own personality and creativity to find ways to be successful at *Student Engagement*, or to manage in it absence.

Implications

The theoretical implications for these findings are intriguing. What we see is that teachers have cultivated a robust sense of their efficacy, in spite of whether support from colleagues or administrators was forthcoming or not. The presence or absence of such support does not seem to be an important part of the assessment of the teaching task, or of verbal persuasion as important sources of efficacy information. Teachers have apparently adapted to the traditional isolation of their work lives and have learned to base their efficacy judgments on other sources. The availability of teaching materials and supplies, however, does register when teachers consider how challenging is the teaching task they are facing and whether or not they are up to the challenge. They also note the level of support from parents. These findings lend support to the Tschannen-Moran, Woolfolk Hoy and Hoy (1998) model of teacher sense of efficacy, and begin to define more and less important sources of information that teachers consider in making efficacy judgments.

The practical implications suggest that as students get older their teachers are likely to find the task more challenging. Middle school and high school teachers feel less confident about their ability to provide appropriate *Instructional Strategies*, to manage the behavior of their students, and to truly engage students at either end of the instructional spectrum. If we hope to garner the rewards of greater persistence and effort that higher efficacy can bring, it would behoove educators to consider structural changes and professional development opportunities that could help boost the efficacy of teachers of older children. The finding of this study suggest that teachers at all levels make their efficacy judgments apart from the level of support of their colleagues and administrators. As schools move to experiment with more collaborative structures, and administrators seek to provide more meaningful feedback through the supervisory process, this may begin to change. The perfunctory twice a year visit with a preprinted evaluation form from administrators is evidently not enough feedback to shape a teacher's belief about his or her own capability. It is disappointing, if not surprising, that these sources of support have not played a larger role in teachers' work lives and their sense of their capability as teachers.

This study is a modest beginning to test the model of teachers' sense of efficacy presented by Tschannen-Moran, Woolfolk Hoy & Hoy (1998). It is of both theoretical and practical importance to begin to understand the sources of information that teachers tap in making judgments about their sense of efficacy. The results of this study suggest that interpersonal support is not of great significance to teachers in making their efficacy judgments, and that material support is only modestly related. More research into important sources of efficacy information would be of great value as we attempt to learn how to better train and equip teachers for their complex tasks. Study designs that would allow researchers to distinguish between disparate sources at different stages of career (preservice, novice, early, mid and late career) would be of particular value.

Teachers' sense of efficacy is a little idea with big impact. Teachers' judgment of their capability to impact student outcomes has been demonstrated to effect teacher behavior, student attitudes and student achievement. We need to know more about how these beliefs are formulated and sustained throughout the teaching career. Although interpersonal support does not seem to play a major role, at least the way schools are currently structured, this study has offered an earnest beginning in the search for the sources that impact teachers sense that they can make a difference.

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*(2), 86-95.

Anderson, R. N., Greene, M. L. & Loewen, P. S. (1988). Relationships among teachers' and students' thinking skills, sense of efficacy, and student achievement. *The Alberta Journal of Educational Research XXXIV*(2), 148-165.

Ashton, P. T. & Webb, R. B. (1986). Teachers' sense of efficacy, classroom behavior, and student achievement. In P. T. Ashton and R. B. Webb (Eds*.), Teachers' sense of efficacy and student achievement* (pp. 125-144). New York & London, Longman**.**

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review 84*(2), 191-215.

Bandura, A. (1997). *Self-Efficacy: The Exercise of Control.* New York, W. H. Freeman & Company.

Woolfolk Hoy, A., & Burke-Spero, R. (2000, April). *Changes in efficacy during the early years of teaching*. Paper presented at the American Educational Research Association, New Orleans, LA.

Burley, W. W., Hall, B. W., Villeme, M. G., & Brockmeier, L. L. (1991, April) *A path analysis of the mediating role of efficacy in first-year teachers' experiences, reactions, and plans.* Paper presented at the annual meeting of the American Educational Research Association, Chicago.

Coladarci, T. (1992). Teachers' sense of efficacy and commitment to teaching. *Journal of Experimental Education 60*(4), 323-337.

Evans, E. D. & Tribble, M. (1986). Perceived teaching problems, self-efficacy, and commitment to teaching among preservice teachers. *Journal of Educational Research 80*(2), 81-85.

Gibson, S. & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology 76*(4), 569-582.

Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A Theoretical Analysis of Its Determinants and Malleability. *Academy of Management Review, 17*(2), 183-211.

Glickman, C. D. & Tamashiro, R. T. (1982). A comparison of first-year, fifth-year, and former teachers on efficacy, ego development, and problem solving. *Psychology in the Schools 19*, 558-562.

Gold, Y. (1996). Beginning teacher support: Attrition, mentoring, and induction. In J. Sikula (Ed.), *Handbook of research on teacher education* (2nd ed., pp. 548-594). New York: Macmillan.

Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education 4*(1), 63-69.

Hall, B. W., Burley, W. W., Villeme, M. G. & Brockmeier, L. (1992, April*). An attempt to explicate teacher efficacy beliefs among first-year teachers.* American Educational Research Association, San Francisco, CA.

Harris & Associates, 1993Meijer, C. J. W. & Foster, S. F. (1988). The effect of teacher self-efficacy on referral chance. *The Journal of Special Education 22*(3), 378-385.

Meijer, C. & Foster, S. (1988) The effect of teacher self-efficacy on referral chance. *Journal of Special Education, 22,* 378-385.

Midgley, C., Feldlaufer, H. & Eccles, J. S. (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*(2), 247-258.

Ross, J. A. (1992). Teacher efficacy and the effects of coaching on student achievement. *Canadian Journal of Education 17*(1), 51-65.

Smylie, M. A. (1988). The enhancement function of staff development: Organizational and psychological antecedents to individual teacher change. *American Educational Research Journal 25*(1), 1-30.

Soodak, L. C. & Podell, D. M. (1993). Teacher efficacy and student problem as factors in special education referral. *The Journal of Special Education 27*(1), 66-81.

Stein, M. K. & Wang, M. C. (1988). Teacher development and school improvement: The process of teacher change. *Teaching & Teacher Education 4*(2), 171-187.

Tschannen-Moran, M. & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing and elusive concept. *Teaching and Teacher Education 17*, 783-805.

Tschannen-Moran, M., Woolfolk Hoy, A. & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research 68*, 202 - 248.