

## ABSTRACT

Since passage of NCLB, schools are trying to insure that their teachers are highly qualified. With all of the concern that teachers are highly qualified academically, attention has waned on teacher personal agency, teacher belief that they can influence learning with all of their students. Yet, it may well be that teacher agency is as important to advancing student learning as teacher content knowledge is believed to be. The current state of research on teacher efficacy can be summarized with the assertion that research has consistently found that teachers with a strong sense of efficacy are significantly more effective with at-risk students. The Association for Supervision and Curriculum Development (ASCD) administers in one of its programs the What Works in Schools survey developed by Robert Marzano. The survey is designed to improve the school and create the foundation for student achievement. The survey features 66 items based on 11 factors associated with the student achievement gains. The current study examines survey data from the What Works in Schools survey. The participants were 534 teachers from 12 different schools in southeast Georgia. The paired samples T-test was used to examine the data with SPSS statistical software. The School Level, Teacher Level, and Instructional Level factors all reported statistically significant difference of the means. The Student Level factor was not statistically significant. The sub-categories returned similar results. Student Motivation, Intelligence and Background Knowledge, and Home Environment results were not statistically significant. Although Home Environment, Intelligence and Background Knowledge, and Student Motivation were not statistically significant, item 22 from Home Improvement and item 29 from Student Motivation show the most promise for improved student achievement.

Single item analysis was conducted with only item 29 showing a statistically significant difference. Single item analysis was conducted comparing the mean difference between the responses from question one and the responses from question two. Only six items from the total of 66 items had a negative mean difference. The negative mean difference indicates that the respondent felt a change in the individual item would result in an increase in student achievement.

Group level item analysis was conducted comparing the mean difference between the responses from question one and the responses from question two. These results seem to indicate that the teachers feel they have much less influence in affecting student achievement when associated with Instructional Level change in practices, Teacher Level change in practices, and even less influence when associated with School Level change in practices. This is supported by the School Level mean difference of .64, the Teacher Level mean difference of .45, and the Instructional Level mean difference of .43. The teachers are more inclined to believe that increased student achievement is affected more by the actions of the student and the students' own initiative. This is supported by the Student Level mean difference of .11.

Research in the literature has shown that teachers do have the power, or agency, to influence student achievement. The results of this analysis of the ASCD survey indicate the responding teachers do not believe they have agency. It becomes the task of the principal to help teachers understand that they do have agency. A close analysis of the WWIS survey can initiate this understanding.

NO CHILD LEFT BEHIND, TEACHER AGENCY, AND THE  
"WHAT WORKS IN SCHOOL SURVEY"

Since passage of NCLB, school districts are taking action to insure that their teachers are highly qualified (Gewertz, 2003, Olson, 2002). NCLB has defined highly qualified teachers as 1) having a bachelor's degree, 2) having full state certification or licensure, and 3) being able to prove they know each subject they teach (Department of Education, 2005). The U.S. Department of Education approves the individual state's definition of teacher competence. NCLB regulations are met by the states' HOSSE criteria. HOSSE stands for "high, objective, uniform state standard of evaluation," and is the way that veteran teachers, who were on the job before the No Child Left Behind law, can show that they are highly qualified.

While undoubtedly well-intentioned, the NCLB requirement that all teachers be well qualified as defined has led to some unintended consequences. For example, some experienced first grade teachers are finding that they must return to college and take algebra. Special education teachers find they must be highly qualified in all of the subjects they teach. A teacher at a Middle School in the Bronx, was arrested on charges of coercing a formerly homeless person to take a certification exam for him (Education Week, 2005).

With the NCLB emphasis on being highly qualified, academically, interest in a teacher's sense of efficacy, their sense that they can influence student learning, has decreased. Yet, it may well be that teacher efficacy is just as important in advancing student learning as content knowledge, especially in the earlier grades and with at-risk students (Allinder, 1995). Other studies as well have suggested a link between teacher sense of efficacy and student achievement (Ashton & Webb, 1986; McLaughlin & Berman, 1977; Gibson & Dembo, 1984; Greene, Anderson, & Loewen, 1988; Hoy & Woolfolk, 1993; Soar & Soar, 1982)

Interest in teacher agency began in the mid-1960s with the work of Rotter (1966) on locus of control. In brief, Rotter identified two types of personalities: those who felt they were in control of their futures and those who felt that powerful others were in control. Bandura (1977), formerly president of the American Psychological Association and currently David Starr Jordan Professor of Social Science and Psychology at Stanford University, built on the work of Rotter by proposing self-efficacy as a unifying theory of behavioral change. Bandura defined self-efficacy as, "...beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p.3). Since his work, interest in teacher efficacy has enjoyed periods of emphasis and periods of little interest. However, since 2000, there has been a renewed interest in teacher efficacy with over 60 articles on the subject published in research journals (Hoy and Spero, 2005; Wheatley, 2005; Tournaki and Podell, 2005; Ross and Gray, 2004; Shaughnessy, 2004; Henson, 2002). In brief, the current state of research on teacher efficacy can be summarized with the assertion that research has consistently found that teachers with a strong sense of efficacy are significantly more effective with at-risk students (Tournaki & Podell, 2005; Ashton & Webb, 1986).

In recognition of this growing body of research, we propose the term "teacher agency" be replaced with the term, "teacher agency". The purpose of this proposal for a change in terminology is to emphasize that emerging research asserts that not only is the belief important (communicated by the term "teacher efficacy"), but they in, fact have the power (communicated by the term "teacher agency") to influence student leaning. With this understanding, teacher agency will be used in the rest of this article.

How much influence do teachers feel they have in affecting the achievement of their students? Webster defines *AGENCY* as action or power. Teacher agency is the power a teacher has to influence students and student achievement. This is different from teacher efficacy or self-efficacy. Self-efficacy is based on the cognitive theory of social learning developed by Albert Bandura (1977, 1997). Bandura was the president of the American Psychological Association in 1974 and is currently the David Starr Jordan Professor of Social Science in Psychology at Stanford University. At the center of Bandura's theory of social learning is the concept of self-efficacy. Bandura (1977) defines self-efficacy in his article "Self-Efficacy: Toward a Unifying Theory of Behavioral Change" as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p.3).

The study of teacher efficacy is a little over two decades old dating back to when the RAND researchers evaluated whether teachers believed they could control the reinforcement of their actions (Armor et al., 1976). Reinforcement assumes that student learning and motivation are the relevant reinforcers of teaching action. The Rand study found that school policies and classroom settings had direct effects on reading achievement and that the more active teachers were in implementing the reading program, the more reading achievement improved and that teachers matter and the more their sense of being able to "get through" to students helps determine how much the students learn (Armor et al.). This early work was founded on Rotter's (1966) locus of control theory. Based on Bandura's work, Gibson and Dembo (1984) define teacher efficacy as the conviction that one can successfully bring about the desired outcomes in one's students.

Colardarci and Breton (1997) state that teacher efficacy researchers traditionally have labeled the two sets of beliefs - teaching efficacy and personal teaching efficacy, respectively

(Ashton & Webb, 1986; Gibson & Dembo, 1984). This language invites confusion given the superordinate construct teacher efficacy. For somewhat different reasons, Hoy and Woolfolk (1990) labeled these constructs general teaching efficacy and personal teaching efficacy.

Self-efficacy research has flourished in recent years (Pajares, 1996). Woolfolk and Hoy (1990) found few consistent relationships between characteristics of teachers and the behavior or learning of students. Teacher efficacy seems to comprise two distinct aspects: personal efficacy and teaching efficacy (Gibson & Dembo, 1984).

Smylie (1988) reported that the proportion of low achieving students in a teacher's classroom had a negative effect on the teacher's sense of efficacy. Differences in degree of personal efficacy have been shown to mediate teacher's (a) expectations of themselves and of their students and (b) interactions with students. In other words, the higher the teacher's sense of efficacy the more interaction with students will occur. (Ashton & Webb, 1986).

Colardarci and Breton (1997) also point out that 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, 1993; Soar & Soar, 1982; also see Ashton, 1984, Dembo & Gibson, 1985), as well as with important student cognitions such as performance expectancies and appraisals (Midgley, Feldlaufer, & Eccles, 1989) and efficacy for achievement (Greene et al., 1988). More efficacious teachers, relative to their less-efficacious peers, also show a preference for collaborative work relationships (Morrison, Walker, Wakefield, & Solberg, 1994).

Recent studies (e.g., Ashton & Webb, 1986; Rosenholtz, 1991) report significant relationships between teachers' degrees of efficacy and student gains on standardized math tests

(Allinder, 1995). These teachers have a tendency to have a warmer and more supportive classroom and the students felt more secure and accepted and scored higher on achievement tests than students of teachers with a low sense of efficacy (Ashton & Webb, 1986). Rosenholtz (1991) found that teachers' regard for their work - their sense of optimism, hope, and commitment - resides in workplace conditions giving them a sense of professional empowerment, self-fulfillment, and a desire for new teaching challenges, opportunities and expanding technical knowledge. Conversely, a teachers' boredom, loss of meaning, lack of appreciation and professional empowerment, usurp the teachers' capacity to dream, followed by a decline in student learning.

Newmann, Rutter, & Smith (1989) and Ashton, Webb, and Doda (1983) studies suggest that school organization, particularly aspects of school climate that help teachers accomplish their goals, may be related to teachers' sense of general and personal teaching efficacy. A study by Newmann, Rutter, and Smith (1989) suggests six organizational effects that may influence teacher efficacy: student's orderly behavior, the encouragement of innovation, teachers' knowledge of one another's courses, the responsiveness of administrators, and teachers' helping one another. No study has yet sampled a large group of teachers using established and reliable indices of climate (Hoy & Woolfolk, 1993).

Recent reports in the literature (Hoy & Woolfolk, 1993; Sachs, 1990) support the focus of teacher attributes of self-efficacy, as a major element in productive schooling. The teachers' competence and self-efficacy, which greatly affects the teacher-student relationship, is at the heart of reform and is the sine qua non of meaningful change in schools (Enderlin-Lampe, 1997).

Recently, some researchers have begun to explore the construct of collective teacher efficacy (Henson, 2002). Goddard, Hoy, & Woolfolk, (2000) defined collective teacher efficacy

as a construct measuring teachers' beliefs about the collective (not individual) capability of a faculty to influence student achievement; it refers to the perceptions of teachers that the efforts of the faculty of a school will have a positive effect on student achievement (p. 486). If we assume that organizational systems can impact individual behavior and perceptions, and that individual behavior can impact organizational systems (as social cognitive theory assumes), then the role of collective teacher efficacy takes on increased importance within school systems (Henson). By collectively believing teachers influence student achievement, which in turn influences organizational systems, teachers' collective efficacy influences school culture and policy vis-à-vis organizational systems.

In Georgia, schools that have failed to meet Adequate Yearly Progress are encouraged to participate and have the teachers take the Works in School Survey online at the Association for Supervision and Curriculum (ASCD) website [www.ascd.org](http://www.ascd.org).

#### Survey Instrument

The Association for Supervision and Curriculum Development (ASCD) is a nonprofit organization representing 170,000 educators from more than 135 countries. It was founded in 1943. Its mission statement advocates sound policies and sharing best practices to achieve success for each learner (Association for Supervision and Curriculum Development, 2005). One of its programs is the administration of the What Works in Schools survey. The survey is designed to improve the school and create the foundation for student achievement using educational research synthesized from the past 35 years and is based on a meta-analysis of more than 500 reports involving more than 9,000 schools.

The survey was developed by Robert Marzano in his latest book, *What Works In Schools: Translating Research into Action*. The survey helps to identify strengths and

weaknesses at the school, classroom, and student levels and helps to create a profile of how a school or district addresses the factors that influence student achievement. ASCD provides analytical reports exposing snapshots of the areas that are most critical to efforts to improve student achievement (Association for Supervision and Curriculum Development, 2005).

In Marzano's previous book, *Classroom Instruction That Works*, Marzano used research he synthesized to identify strategies proven to increase student achievement. *What Works in School* is also synthesized research which identifies 11 key factors that, according to research, have been proven to increase student achievement. Marzano states, "My basic position is quite simple: schools can have a tremendous impact on student achievement if they follow the direction provided by the research." (Marzano, 2003, p. 4).

The eleven factors are organized into three categories:

**School-Level Factors:**

- A Guaranteed and Viable Curriculum
- Challenging Goals and Effective Feedback
- Parent and Community Involvement
- Safe and Orderly Environment
- Collegiality and Professionalism

**Teacher-Level Factors:**

- Instructional strategies
- Classroom management
- Classroom curriculum design

**Student-Level Factors:**

- Home Environment

- Learned Intelligence and Background Knowledge
- Student Motivation

Marzano adds Leadership as a final factor which he considers to be critical and which he says, “could be considered the single most important aspect of effective school reform...it influences every aspect of the model presented in this book” (Marzano, 2003, p. 172).

The survey asks administrators and teachers to respond with their perceptions about the performance of their school or district. The survey features 66 items based on the 11 factors associated with the largest student achievement gains as reported in research studies over the past 35 years. For each of the 66 items, participants answer three questions using a scale from one to four:

1. To what extent do we engage in this behavior or address this issue?
2. How much will a change in our current practices on this item increase the academic achievement of our students?
3. How much effort will it take to significantly change our current practices regarding this issue?

Answers to these questions will help identify the 5 most likely areas from the WWIS survey composite report that will need to be addressed to increase student achievement in the school or district. The survey takes approximately 30-40 minutes to complete and individual responses are anonymous. Results are available to the school after all staff members have completed the survey. The survey offers tools and resources to address specific areas of need. The responses are analyzed using the mean (average) and the standard deviation (how much variation in responses)(Association for Supervision and Curriculum Development , 2005).

Differences in student achievement are due to many factors including home life, motivation, quality of teaching, and many other factors. Marazano's study provides evidence that there is a lot that schools and teachers can do to increase student achievement.

#### *WWIS Survey Analysis Tool*

In addition to the WWIS survey we have used a tool developed by Dr. Bobby Smith, Director of Leadership Training for the Georgia Proficiency Standards. Mr. Smith created an Excel spreadsheet which allows a school administrator to enter the means from question 1, 2, and 3 from the WWIS survey analysis and further analyze the data. The data can be sorted by question 1, 2, or 3 allowing identification of areas of weaknesses and strengths which the administrator may wish to address. Using this Excel spreadsheet the researchers at the Georgia Center for Educational Renewal (GCER) at Georgia Southern University have taken the analysis one step further by identifying possible teacher agency issues and correlating them to the school level, student level, and teacher level factors and further correlation to the sub groups in each of these areas. By so doing, the researchers have been able to isolate specific areas of interest to administrators. The participants were 534 teachers from 12 different schools in southeast Georgia. The paired samples T-test was used to examine the data with SPSS statistical software.

#### Findings

Single item analysis was done using paired samples T-tests with SPSS statistical software comparing the mean difference between the responses from questions one and two. Only six items from the total of 66 items had a negative mean difference. The negative mean difference indicates that the respondent felt a change in the individual item would result in an increase in student achievement. Item 29 showed a statistically significant difference. Item 29 is "students

are provided with motivational training" and suggests the strongest indicator for improved academic achievement would result from implementation of this. Other items that show the most promising results are listed in the same table (see Table 3) but were not statically significant (see Table 1).

Table 1: Results of t-tests and Descriptive Statistics

Outcome		Group				n	r	t	df
		Question 1		Question 2					
		M	SD	M	SD				
Item 17	Safe Environment	2.60	.46	2.70	.42	12	-.71	-.45	11
Item 18	Safe Environment	2.57	.51	2.71	.47	12	-.79	-.51	11
Item 22	Home Environment	2.49	.62	2.80	.47	12	-.59	-1.13	11
Item 29	Student Motivation	2.25	.39	2.70	.31	12	-.51	-2.55*	11
Item 31	Instruction	2.50	.34	2.56	.27	12	-.34	-.44	11
Item 53	Instruction	2.58	.27	2.65	.30	12	-.24	-.50	11

\*p<.05.

As shown in Table 1, there are statistically significant differences in Question 1 and Question 2 for Item 29 under Student Motivation, but not for any of the other items. These results suggest that teachers believe a change in practice for providing student motivation will increase academic achievement of students.

The category factors of School Level, Student Level, Teacher Level, and Instructional Level factors were also subjected to paired samples T-tests with SPSS statistical software comparing the mean difference between the responses from questions one and two. School Level, Teacher Level, and Instructional Level factors all reported significant difference of the means. The Student Level factor was not significant. The significance reported here is reflected from positive mean difference which suggests that the teachers believe they are doing all they can do in the specific area and that any change in practice would not have an impact on student achievement. It also suggests that teachers believe an increase in academic achievement would have to come from efforts by the students and that the teachers would have little if any effect on increased academic achievement since they are doing all they can do (see Table 2).

Table 2: Results of t-tests and Descriptive Statistics

Outcome	Group				n	r	t	df
	Question 1		Question 2					
Category	M	SD	M	SD				
School Level Factor	3.12	.40	2.48	.41	25	-.66	13.69*	25
Student Level Factor	2.78	.49	2.67	.39	96	-.58	1.35	95
Teacher Level Factor	3.02	.35	2.58	.38	44	-.43	15.18*	44
Instructional Level Factor	2.98	.37	2.55	.36	28	-.38	11.93*	28

\* $p < .05$ .

As shown in Table 2, there are statistically significant differences in School Level Factor, Teacher Level Factor, and Instructional Level Factor but not Student Level Factor. These results suggest that teachers believe they are doing all they can do and any increase in academic achievement would have to come from the students efforts.

The sub-categories returned similar results using paired samples T-tests with SPSS statistical software. Student Motivation was not significant as well as Home Environment and Intelligence and Background Knowledge. Although Home Environment and Student Motivation were not statistically significant item 22 from Home Improvement and item 29 from Student Motivation do show the most promise for improved student achievement. Here again the results suggest the teachers believe they are doing the best job they can to produce optimal achievement or they believe that any changes in practice would not significantly improve achievement (see Table 3).

Table 3: Results of t-tests and Descriptive Statistics

Outcome	Group				n	r	t	df
	Question 1		Question 2					
Sub-Category	M	SD	M	SD				
Curriculum	3.07	.37	2.53	.37	60	-.75	6.01*	59
Goals & Feedback	3.27	.31	2.41	.39	48	-.65	9.33*	47
P & C Involvement	3.22	.34	2.36	.39	48	-.39	9.83*	47
Safe Environment	3.00	.54	2.59	.48	60	-.71	3.40*	59
Collegiality and Professionalism	3.06	.30	2.47	.35	36	-.66	6.08*	35
Home Environment	2.49	.62	2.80	.47	12	-.59	-1.13	11
Intelligence & Background Knwl	2.90	.41	2.69	.40	36	-.74	1.68	35
Student Motivation	2.76	.48	2.63	.36	48	-.50	1.29	47
Instruction	2.96	.37	2.55	.36	28	-.38	11.93*	287
Class Management	3.15	.29	2.63	.43	96	-.69	7.70*	95
Class Curriculum	3.04	.29	2.62	.39	60	-.62	5.34*	59

\* $p < .02$

As shown in Table 3, there are statistically significant differences in all sub-categories except Home Environment, Intelligence & Background Knowledge, and Student Motivation. These results suggest that teachers believe they are doing all they can do and any increase in academic achievement would have to come from the students efforts or the home.

Category Level analysis was done comparing the mean difference between the responses from question one and two (see Table 4). These results seem to indicate that the teachers feel they have much less influence in affecting student achievement when associated with Teacher Level or Instructional Level change in practices and even less influence when associated with School Level change in practices. This is supported by the School Level mean difference of .64 and the Teacher Level mean difference of .44 and the Instructional Level mean difference of .43. The teachers are more inclined to believe that increased student achievement is affected more by the actions of the student and the students' own initiative. This is supported by the Student Level mean difference of .11. While the mean difference of .11 does not support the premise that a change in practice will increase student achievement it does show that the teachers feel that the

Student Level items come closer to increasing achievement than School Level items or Teacher Level items.

While the teachers felt that student achievement would increase if practices were changed in six of the items (see Table 1), the overwhelming conclusion was that teachers feel that they are doing all they can to increase student achievement and that changing current practices would not lead to an increase in student achievement. If we look at the mean difference in the responses from question one and question two and eliminate the six items teachers feel would make a difference, the mean difference between the responses from question one and question two is .53. This seems to indicate that teachers either feel that they are doing all they can to increase student achievement and that changing current practices will not affect student achievement or they feel that they have little or nothing to do with any increase in student achievement and that student achievement increases lie in the hands of other people or come under the auspices of some other control.

Table 4: Category Level Mean Difference

Category	Question 1	Question 2	Difference
	Mean	Mean	
School Level Factor	3.12	2.48	.64*
Student Level Factor	2.78	2.67	.11
Teacher Level Factor	3.02	2.58	.44*
Instructional Level Factor	2.98	2.55	.43*

\* $p < .05$ .

As shown in Table 4, there are statistically significant differences in the sub-categories School Level Factor, Student Level Factor, and Instructional Level Factor. These results seem to indicate that the teachers feel they have much less influence in affecting student achievement when associated with Teacher Level or Instructional Level change in practices and even less influence when associated with School Level change in practices.

Examining all the items mean differences reveals a mean of 2.99 on Q1 and a mean of 2.57 on Q2 with a mean difference of .42 (see Table 5). This indicates the teachers don't feel that a

change in practice will improve achievement significantly. Either the teachers feel they are doing the best job they can to produce optimal achievement or they feel that any changes in practice would not significantly improve achievement.

Table 5: Sub-Category Level Mean Difference

Outcome Sub-Category	Group		Mean difference
	Question 1 M	Question 2 M	
Curriculum	3.07	2.53	.54*
Goals & Feedback	3.27	2.41	.86*
P & C Involvement	3.22	2.36	.86*
Safe Environment	3.00	2.59	.42*
Collegiality and Professionalism	3.07	2.47	.60*
Home Environment	2.49	2.80	-.32
Intelligence & Background Knwl	2.90	2.69	.21
Student Motivation	2.76	2.63	.14
Instruction	2.98	2.55	.43*
Class Management	3.15	2.63	.52*
Class Curriculum	3.04	2.62	.42*
Total difference	3.00	2.57	.43*

\*p<.02

As shown in Table 5, there are statistically significant differences in all sub-category mean differences except Home Environment, Intelligence & Background Knowledge, and Student Motivation. These results suggest that teachers believe they are doing all they can do and any increase in academic achievement would have to come from the students efforts or the home.

### Conclusion

Research in the literature has shown that teachers do, in fact, have the power, or agency, to affect an increase in student achievement. Unfortunately, the results of this particular research indicate the teachers believe just the opposite. It becomes the task of the principals and administrators to help the teacher to restore that sense of self-efficacy and empower the teacher with a new sense of teacher agency. The WWIS survey can be the beginning of a closer examination of how your school ranks in regards to its ability to increase student achievement.

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