



## ASSESSING TEACHER SELF-EFFICACY AND JOB SATISFACTION: MIDDLE SCHOOL TEACHERS

Assist. Prof. Dr. Seyithan Demirdag  
Bülent Ecevit University  
Department of Educational Sciences  
TURKEY  
[seyithandemirdag@gmail.com](mailto:seyithandemirdag@gmail.com)

### Abstract

The purpose of this study was to investigate the relationship between the self-efficacy and job satisfaction of middle school teachers. Teaching profession is one of the most difficult jobs in the world. Schools have experienced having shortages of quality teachers with strong skills in the areas of student engagement, instructional practices, and classroom management. The participants of the study included 208 middle school teachers in USA. The study employed a non-random sampling design. The data were collected by the *Teachers' Sense of Efficacy Scale (TSES)* and the *Job Satisfaction Survey (JSS)*. The *TSES* included 24 items with three subscales including efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management. The *JSS* included 36 items with 9 subscales including pay, promotion, supervision, fringe benefits, contingent rewards, operating, coworkers, nature of work, and communication. The study results indicated non-significant and negative correlation between teacher self-efficacy and job satisfaction.

**Key Words:** Self-efficacy, job satisfaction, middle school teachers.

### INTRODUCTION

An emerging body of research suggests that self-efficacy of teachers is associated with positive outcomes such as promoting student learning, motivation, and achievement. In addition, research indicates that there is a relationship between teachers' self-efficacy and factors including job commitment and job satisfaction (Caprara, Barbaranelli, Borgogni, & Steca, 2003). Although there is evidence demonstrating an association between teachers' self-efficacy and student and teacher outcomes, little is known about how self-efficacy is related to teachers' job satisfaction. Teachers' self-efficacy is considered to be one of the most important factors effecting teachers' job satisfaction during their challenging teaching years (Tschannen-Moran & Woolfolk Hoy, 2007; Wolters & Daugherty, 2007). Such challenges may negatively influence teachers' motivation and job satisfaction (Spickard, Gabbe, & Christensen, 2002).

### Teachers' Self-Efficacy

Teacher efficacy includes important implications in education. A teacher's efficacy is the capability of bringing about the desired outcomes for student engagement and learning of both motivated and unmotivated ones (Bandura, 1977). Self-efficacy, can make instructional strategies more meaningful by engaging all students in learning activities. Researchers have indicated that teachers' sense of self-efficacy is related to positive student outcomes such as achievement (Moore & Esselman, 1992). In addition, teachers' self-efficacy has a relationship with students' behavior in the classroom (Allinder, 1994). Research shows that self-efficacy has a lot of benefits for teachers. Teachers, who have high levels of self-efficacy are more open to new ideas, exhibit greater levels of planning and organization, tend to experiment new teaching strategies with their students, and have clear goals with higher levels of aspiration (Allinder, 1994; Guskey, 1988; Stein & Wang, 1988). Greater efficacy beliefs encourage teachers to have more resilience and be less critical of students, who make errors (Ashton & Webb, 1986). Teachers with greater self-efficacy have greater desires for teaching and are more likely to continue staying in teaching position (Soodak & Podell, 1993) as they would write less numbers of discipline referrals due to having successful classroom management (Demirdag, 2015). Although self-efficacy of teachers has many benefits in education, yet not much is known about its relationship with teachers' job satisfaction.



Self-efficacy allows individuals to initiate their capabilities in order to successfully carry out a particular mission. People may be successful in education, health, business, and sports when they obtain high levels of self-efficacy (Bandura, 1997). Teachers' self-efficacy is not only a strong indicator of their capabilities, it also plays an important role in shaping behavior and achievement of students. Researchers suggest that self-efficacy has an effect on both students' motivation and teachers' teaching strategies (Skaalvik & Skaalvik, 2007; Tschannen-Moran & Woolfolk Hoy, 2001) and critical thinking (Demirdag, 2015). In addition, research shows that individuals with low levels of self-efficacy may have negative influences on both teachers' teaching methods and students' behaviors and engagement.

In his study, Betoret (2006) found that lower levels of self-efficacy of teachers may create greater difficulties in providing effective teaching strategies and higher levels of job-related problems (Klassen et al., 2009). Even though Bandura (1997) indicated that self-efficacy beliefs of teachers could remain in balance once established, some researchers claimed that such beliefs may change across stages of a career (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). Some research conducted on teachers' self-efficacy exhibited mixed results between years of teaching experience and teachers' self-efficacy. In a study, Ross, Cousins, and Gadalla (1996) found that years of being in teaching profession has both positive and negative effects on teachers' self-efficacy beliefs. Ghaith and Yaghi (1997) claimed that there were negative correlations between years of experience and teacher self-efficacy. In their research, Woolfolk Hoy and Burke Spero (2005) conducted a study to find the effects of teaching experience on self-efficacy beliefs of teachers. In this longitudinal study, researchers found different results. First, results showed a significant increase in teachers' self-efficacy during teacher training, then followed by a decline at the end of their first year of teaching profession. Another study, which included about 1,024 participants was conducted by Wolters and Daugherty (2007) to find the relationship between self-efficacy beliefs of teachers and their teaching experience in the job. They found that the experience of teachers had only a modest effect on their self-efficacy.

Albert Bandura (1997) claimed that people may re-structure or scale down their job related goals due to lower levels of self-efficacy beliefs. The environments of workplaces may have substantial impacts on self-efficacy beliefs of people. Indicators such as verbal persuasion and modeling of supervisor influence self-efficacy development of the workers (Bandura, 1997). In a study, Kooij, de Lange, Jansen, & Dikkers, (2008) suggested years of experience and psychological indicators may effect motivation and self-efficacy beliefs of teachers. In addition, Tschannen-Moran et al. (1998) suggested that past experience; communication with principals, students, peers, and parents can mediate the development of self-efficacy of teachers. Research also shows that the sources of self-efficacy may change over the course of a particular time as such sources may have a positive or negative effect on teachers' job satisfaction (Tschannen-Moran & Woolfolk Hoy, 2007).

### Job Satisfaction

Reports have shown that many teachers exhibit dissatisfaction in their jobs due to job stress (Chaplain, 2008; Schwarzer & Hallum, 2008). Job satisfaction is considered as a perception of fulfillment, which is associated with higher levels of job performance (Judge, Thoresen, Bono, & Patton, 2001). Job satisfaction is decisive, which contributes to teachers' performance and attitudes. Research found that self-efficacy is an important contributor of job satisfaction (Caprara et al., 2003). Several indicators such as working with children, seeing students make progress, working with supportive colleagues, and overall school climate in the schools may create job satisfaction among teachers (Cockburn & Haydn, 2004). Teachers with low levels of self-efficacy tend to be dissatisfied with their jobs, thus leaving their teaching profession (Evans, 2001; Ingersoll, 2001). Poor working conditions and a heavy teaching workload may strongly influence job satisfaction of teachers (Liu & Ramsey, 2008). Such working environments even effect teachers' classroom management, which may have a negative influence on student self-esteem and engagement in learning tasks (Demirdag, 2015).

Teaching environments may include both satisfaction and stress for teachers due to demands from administrators, colleagues, students, and parents compounded by work overload, student misbehavior, and a lack of recognition for accomplishments (Greenglass & Burke, 2003). Research shows that dissatisfaction due to job stress may have negative effects on teacher's work (Kyriacou, 2001), self-efficacy (Betoret, 2006; Schwarzer & Hallum, 2008; Skaalvik & Skaalvik, 2007), and teaching effectiveness (Abel & Sewell, 1999; Kokkinos, 2007). Although, in some cases job stress creates job satisfaction for teachers, such satisfaction may be muted due

factors as low autonomy and self-efficacy (Greenglass & Burke, 2003). Teaching profession is considered as one of the most stressful jobs. Research suggests that heavy teaching work load and student attitudes contribute to teachers' job stress resulting in negative health outcomes, emotional exhaustion, de-personalization, reduced personal accomplishment, and lower levels of self-efficacy (Betoret, 2006; Jepson & Forrest, 2006; Kyriacou, 2001).

### Theoretical Framework

This study employed Bandura's self-efficacy theory as a theoretical framework (Bandura, 1977). According to this theory, self-efficacy effects people's behavior, thinking, and motivation. People with self-efficacy are successful in accomplishing certain tasks. Although some research indicated that knowledge and skills were required for success, Bandura (1997) suggested that having a low self-esteem could lower personal success as well. According to Bandura (1994), four main sources effect people's self-efficacy: mastery experiences, vicarious experiences, social (verbal) persuasion, and somatic and emotional states in judging one's capabilities (physiological arousal). Among these, mastery experiences are the most effective source of self-efficacy. Mastery experiences exist when people succeed at performing tasks. Vicarious experiences include modeling other people and their success. Social (verbal) persuasion, can influence people's self-efficacy if it includes affirmative encouragement. Lastly, emotional states in judging one's capabilities (physiological arousal) is about how one reacts to different situations such as health functioning, and coping with stressors, and physical accomplishments (Bandura, 1997). Relieved stress may increase self-efficacy, thus job satisfaction. Teaching profession is one of the most challenging jobs in the world. Although, researchers have made crucial contributions by finding results between the relationship of self-efficacy beliefs of teachers and the years that they have been in teaching profession, results are not clear. Therefore, understanding the current level of teacher self-efficacy and job satisfaction among teachers is crucial.

### Purpose of the Study

The aim of this quantitative study was to examine teachers' self-efficacy and job satisfaction. As a result, major questions that arose from the review of literature were:

1. What are the beliefs of middle school teachers about their self-efficacy?
2. What are the beliefs of middle school teachers about their job satisfaction?
3. Is there a relationship between teacher self-efficacy and job satisfaction?

### METHOD

A non-random selection of participants was used in this quantitative methodology. The researcher used such approach to measure objectives and facts such as self-efficacy and job satisfaction of middle school teachers. The study employed statistical methods, which included correlational designs to reduce bias and objectively present and generalize results (Cronbach, 1975; Powdermaker, 1966). It evaluated the various perspectives on self-efficacy and job satisfaction of middle school teachers in western part of the U.S.

Table 1: Percentages of Genders Participating in the Study

Group	N	Percent	Cumulative Percent
Female	111	53	53
Male	97	47	100
Total	208	100	

### Setting

This research examined self-efficacy and job satisfaction of middle school teachers in six middle schools in the western part of the U.S. Each school had an average of 60 teachers. All of the schools were located in economically disadvantaged areas. The total student enrollment from six schools were about 5,980 students. Of this population, 75% of the students were Hispanic, 12% of the students were African – American, 9% of the students were Caucasian, and about 4% of the students were from other ethnicities. Most of the students (about 84%) received free or reduced lunch.



### Sample

The quantitative study sample included 208 middle school teachers from different grade levels. Female participants were %53 and the male participants were %47 in the study (see Table 1). The participants were given enough time to answer questions on two instruments: TSES and JSS. They had 1-28 years of teaching experience. The teaching fields of the participants included math, science, social studies, language, dance, and physical education.

### Data Collection Tools

Two instruments were used in this study. *Teachers' Sense of Efficacy Scale (TSES)* was developed by Tschannen-Moran and Hoy (2001). The instrument had 24 items with three subscales including efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management. Each subscale included eight items. The instrument was a 9-point Likert scale providing 9 possible responses (1 and 2 = nothing, 3 and 4 = very little, 5 and 6 = some influence, 7 and 8 = quite a bit, and 9 = a great deal). The reliability of the instrument and its subscales was measured. The coefficient alpha (Cronbach, 1951) indicated reliability as it was .94 for the instrument, .87 for efficacy in student engagement, .91 for efficacy in instructional strategies, and .90 for efficacy in classroom management. Before this study, the instrument was pilot tested with 105 middle school teachers and the coefficient alpha showed reliability as it was .87.

The second instrument used in the study was *Job Satisfaction Survey (JSS)* was developed by Spector (1985). It had 36 items with 9 subscales including pay, promotion, supervision, fringe benefits, contingent rewards, operating, coworkers, nature of work, and communication. Each subscale included four items. The instrument was a six-point Likert scale providing six possible responses (1 = disagree very much, 2 = disagree moderately, 3 = disagree slightly, 4 = agree slightly, 5 = agree moderately, and 6 = agree strongly). The developer of the instrument suggested that a mean score of 4 or more represents satisfaction, 3 or less represents dissatisfaction, and between 3 and 4 represents ambivalence. The coefficient alpha (Cronbach, 1951) indicated reliability as it was .91 for the instrument, .75 for pay, .73 for promotion, .82 for supervision, .73 for fringe benefits, .76 for contingent rewards, .62 for operating, .60 for coworkers, .78 for nature of work, and .71 for communication. Prior to this study, the instrument was pilot tested with 105 middle school teachers and the coefficient alpha indicated reliability as it was .89.

### Data Analysis

The participants in the study answered questions on two surveys. After data collections, the data set was imported to SPSS 20.0 for the analysis. The data were analyzed on the basis of means, standard deviations, the results of paired samples t-tests and Pearson product-moment correlation coefficient. Paired samples t-tests were used to examine the mean differences on self-efficacy and job satisfaction of middle school teachers. In addition, the relationship between teachers' self-efficacy and job satisfaction was investigated by Pearson product-moment correlation coefficient. The results of the data analysis were then examined based on the self-efficacy and job satisfaction of middle school teachers.

### FINDINGS

The results are presented according to self-efficacy and job satisfaction beliefs of middle school teachers. In addition, the relationship between middle school teachers' self-efficacy and job satisfaction was analyzed based on the mean differences on JSS and TSES instruments.

The mean values on the subscales – pay, promotion, supervision, fringe benefits, rewards, operating conditions, coworkers, nature of work, and communication – of JSS instrument showed that most subscales had different mean scores (see Table 2). Teachers received the highest mean score on supervision (M = 4.38, SD = .59) and the lowest mean score on operating conditions (M = 3.47, SD = .57). They had same mean values on both coworkers (M = 3.85, SD = .54) and communication (M = 3.85, SD = .50). Middle school teachers scored higher on fringe benefits (M = 4.28, SD = .59), than rewards (M = 3.98, SD = .64), promotion (M = 3.61, SD = .56), nature of work (M = 3.60, SD = .50), and pay (M = 3.52, SD = .57).

Table 2: Summary of ranges, means, and standard deviations on dispositions of JSS.

Group	N	Min-Max	M	SD
Pay	208	2.00-5.00	3.52	.57
Promotion	208	1.75-5.25	3.61	.56
Supervision	208	1.75-5.50	4.38	.59
Fringe Benefits	208	1.00-5.50	4.28	.59
Rewards	208	2.00-5.75	3.98	.64
Operating Conditions	208	1.50-5.00	3.47	.57
Coworkers	208	2.25-5.50	3.85	.54
Nature of Work	208	2.25-5.50	3.60	.50
Communication	208	2.25-4.75	3.85	.50

**Note.** JSS = Job Satisfaction Survey.

Table 3: Summary of ranges, means, and standard deviations on dispositions of TSES.

Group	N	Min-Max	M	SD
Student Engagement	208	2.00-7.25	4.32	1.06
Instructional Strategies	208	2.50-8.87	4.61	1.02
Classroom Management	208	2.50-8.25	4.77	1.15

**Note.** TSES = Teachers' Sense of Efficacy Scale.

Middle school teachers had similar mean values on student engagement, instructional strategies, and classroom management (see Table 3). They had the highest mean values on classroom management ( $M = 4.77$ ,  $SD = 1.15$ ). Teachers scored higher on instructional strategies ( $M = 4.61$ ,  $SD = 1.02$ ) than student engagement ( $M = 4.32$ ,  $SD = 1.06$ ).

Table 4: Paired samples t-test results on mean scores between JSS and TSES.

Group	N	Mean	SD	t	Sig. (2-tailed)
Job Satisfaction	208	3.84	.24	-12.46	.00
Teacher Efficacy	208	4.57	.80		

**Note.** JSS = Job Satisfaction Survey. TSES = Teachers' Sense of Efficacy Scale.

After analyzing data on self-efficacy and job satisfaction beliefs of middle school teachers, paired samples t-test results showed significant results between two constructs (see Table 4). The results showed that teachers had higher mean scores on overall self-efficacy beliefs ( $M = 4.57$ ,  $SD = .80$ ) than the beliefs on overall job satisfaction ( $M = 3.84$ ,  $SD = .24$ ) with conditions,  $t(207) = -12.46$ ,  $p < .01$ .

Table 5: Correlation matrix between job satisfaction and sense of self-efficacy of teachers.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Pay	1.00													
Promotion	.34**	1.00												
Supervision	.08	.21**	1.00											
Fringe Benefits	.07	.10	.24**	1.00										
Rewards	.18**	.02	.19**	.32**	1.00									

Operating Conditions	.12	-.04	.10	.19**	.27**	1.00								
Coworkers	.07	-.04	.06	.13*	.06	.10	1.00							
Nature of Work	-.03	-.002	-.03	-.07	-.05	-.04	-.03	1.00						
Communication	-.04	-.11	.02	-.09	.02	.04	-.04	.16*	1.00					
Student Engagement	.10	.07	-.04	.01	-.04	-.02	-.04	.05	.01	1.00				
Instructional Strategies	-.11	-.10	-.03	.04	-.03	.18**	-.03	-.02	.03	.28**	1.00			
Classroom Management	-.08	-.08	-.02	.08	-.13	.17**	.04	.04	-.13	.20**	.54**	1.00		
Job Satisfaction	.48**	.40**	.51**	.53**	.57**	.47**	.34**	.19**	.21**	.02	-.02	-.03	1.00	
Teacher Efficacy	-.04	-.04	-.04	.06	-.09	.15*	-.01	.03	-.04	.65**	.80**	.79**	-.01	1.00

\*\* . Correlation is significant at the 0.01 level (2-tailed); \* . Correlation is significant at the 0.05 level (2-tailed).

The Pearson's correlation analysis was conducted to examine the relationship between middle school teachers' self-efficacy beliefs and job satisfaction (see Table 5). The findings indicated a negative and a non-significant relationship between overall job satisfaction and overall self-efficacy beliefs ( $r = -.01$ ). The relationship between job satisfaction and student engagement ( $r = .02$ ), instructional strategies ( $r = -.02$ ), and classroom management ( $r = -.03$ ) was non-significant. As a subscale of self-efficacy, student engagement had no relationship with any subscales of job satisfaction. However there was a significant relationship between instructional strategies and operating conditions ( $r = .18$ ). In addition, study findings indicated meaningful relationships between classroom management and operating conditions ( $r = .17$ ). Lastly, a significant relationship between overall teacher self-efficacy and operating conditions ( $r = .15$ ) was found. As a result, findings showed that there was no meaningful relationship between self-efficacy beliefs and job satisfaction of middle school teachers.

## DISCUSSION AND CONCLUSION

This study examined the sense of self-efficacy beliefs of middle school teachers and found that teachers' beliefs were very little about their own student engagement, instructional strategies, and classroom management. In their study, Skaalvik and Skaalvik (2007) found that self-efficacy influence instructional strategies of teachers. In similar studies, Tschannen-Moran and Woolfolk Hoy (2001) suggested that low levels of self-efficacy of teachers may have a negative effect on student engagement and behaviors. Based on the study results it is crucial for school leaders to take necessary actions in order to boost self-efficacy beliefs of teachers as such beliefs may make a substantial contribution to teachers' classroom management and teaching strategies and students' engagement in learning tasks.

Examining data results about job satisfaction indicated that middle school teachers demonstrated satisfaction on two subscales of job satisfaction: supervision and fringe benefits. Middle school teachers indicated dissatisfaction on pay, promotion, rewards, operating conditions, coworkers, nature of work, and communication. Having dissatisfaction about their jobs, middle school teachers may perform lower while teaching (Judge et al., 2001). Chaplain (2008) suggested that many teachers have exhibited dissatisfaction in their jobs. In their study, Cockburn and Haydn (2004) found that working with children, seeing students make progress, working with supportive colleagues, and overall school climate in the schools are important factors, which could affect teachers' job satisfaction. Administrators need to be aware of the factors that influence teachers' job satisfaction because indicators such as poor working conditions and negative school climate may lower teachers' performance and create job related stress (Liu & Ramsey, 2008). Parallel to these findings of Betoret (2006), the findings of this study suggested that there was a meaningful difference on mean scores between overall job satisfaction and overall sense of teacher efficacy of middle school teachers.



After examining the relationship between middle school teachers' self-efficacy beliefs and job satisfaction, the findings indicated that there was no relationship between overall job satisfaction and overall self-efficacy beliefs. In parallel findings, Ghaith and Yaghi (1997) found that there were negative correlations between years of experience and teacher self-efficacy. However, several studies found that sense of self-efficacy beliefs of teachers is one of the most important factors effecting teachers' job satisfaction (Tschannen-Moran & Woolfolk Hoy, 2007; Wolters & Daugherty, 2007). The findings of this study suggested that the relationship between overall job satisfaction and overall self-efficacy beliefs was negative and non-significant. In addition, some researchers indicated that job stress aside from self-efficacy beliefs may be one of the main factors contributing to teachers' job dissatisfaction (Betoret, 2006; Jepson & Forrest, 2006; Kyriacou, 2001).

The conclusion of this empirical study showed that although most of the previous studies indicated a relationship between job satisfaction and self-efficacy of middle school teachers, the findings of this study suggested that there was no relationship between teachers' sense of self-efficacy beliefs and job satisfaction. The results concluded that teachers' beliefs about their self-efficacy were very little on all subscales: student engagement, instructional strategies, and classroom management. On the other hand, middle school teachers showed dissatisfaction about their jobs on most of the subscales of job satisfaction. Teachers showed satisfaction only on two of the subscales of job satisfaction: supervision and fringe benefits. Based on research findings, it is crucial for school leaders to consider taking certain steps in order to increase self-efficacy and job satisfaction of teachers as middle school teachers scored low on these measures. In line with previous research findings, teachers with lower levels of self-efficacy beliefs and job satisfaction tend to lose their motivation and fail to provide effective teaching approaches for student learning.

This research has important limitations and suggestions that must be considered in order to adequately interpret the findings. The study sample was small, which may not be generalized to entire population of teachers. In addition, the study may include researcher bias as the researcher was the only person collecting and analyzing data. The researcher double checked all the data to minimize researcher bias and strengthen validity of the study. As for the suggestions, the study could be conducted in different school settings with larger numbers of teachers so that the study findings could be generalized.

**WJEIS's Note:** This article was presented at 6<sup>th</sup> International Conference on New Trends in Education and Their Implications - ICONTE, 24-26 April, 2015, Antalya-Turkey and was selected for publication for Volume 5 Number 3 of WJEIS 2015 by WJEIS Scientific Committee.

## REFERENCES

- Allinder, R. M. (1994). The relationship between efficacy and the instructional practices of special education teachers and consultants. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, 17(2), 86-95.
- Ashton, P. (1984). Teachers' Sense of Efficacy: A Self-or Norm-Referenced Construct? *Florida Journal of Educational Research*, 26(1), 29-41.
- Abel, M. H., & Sewell, J. (1999). Stress and burnout in rural and urban secondary school teachers. *The Journal of Educational Research*, 92, 287-293.
- Bandura, A. (1994). Self-Efficacy. In V.S. Ramachandran (Ed.), *Encyclopedia of human behavior*, 4, 71-81.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Betoret, F. D. (2006). Stressors, self-efficacy, coping resources, and burnout among secondary school teachers in Spain. *Educational Psychology*, 26, 519-539.



- Caprara, G. V., Barbaranelli, C., Borgogni, L., & Steca, P. (2003). Efficacy beliefs as determinants of teachers' job satisfaction. *Journal of Educational Psychology, 95*, 821–832.
- Chaplain, R. P. (2008). Stress and psychological distress among trainee secondary teachers in England. *Educational Psychology, 28*, 195–209.
- Cronbach, L. J. (1975). Beyond the two disciplines of scientific psychology. *American Psychologist, 30*, 116–127.
- Cockburn, A. D., & Haydn, T. (2004). *Recruiting and retaining teachers: Understanding why teachers teach*. London, England: Routledge Falmer.
- Demirdag, S (2015). Classroom management and students' self-esteem: Creating positive classrooms. *Educational Research and Reviews, 2*(3), 191-197.
- Demirdag, S (2015). Self-assessment of middle school teachers: Classroom management and discipline referrals. *International Journal on New Trends in Education and Their Implications, 6*(2), 45-55.
- Demirdag, S (2015). The relationship between critical thinking abilities and classroom management skills of high school teachers. *Educational Research and Reviews, 10*(7), 850-855
- Evans, L. (2001). Delving deeper into morale, job satisfaction, and motivation among education professionals. *Educational Management and Administration, 29*, 291–306.
- Ghaith, G., & Yaghi, H. (1997). Relationships among experience, teacher efficacy, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education, 13*, 451–458.
- Greenglass, E. R., & Burke, R. J. (2003). Teacher stress. In M. F. Dollard, A. H. Winefield, & H. R. Winefield (Eds.), *Occupational stress in the service professions* (pp. 213–236). New York, NY: Taylor and Francis.
- Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and teacher education, 4*(1), 63-69.
- Ingersoll, R. (2001). Teacher turnover and teacher shortage. *American Educational Research Journal, 38*, 499–534.
- Jepson, E., & Forrest, S. (2006). Individual contributory factors in teacher stress: The role of achievement striving and occupational commitment. *British Journal of Educational Psychology, 76*, 183–197.
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127*, 376–407.
- Klassen, R. M., Bong, M., Usher, E. L., Chong, W. H., Huan, V. S., Wong, I. Y., & Georgiou, T. (2009). Exploring the validity of the Teachers' Self-Efficacy Scale in five countries. *Contemporary Educational Psychology, 34*, 67–76.
- Kokkinos, C. M. (2007). Job stressors, personality, and burnout in primary school teachers. *British Journal of Educational Psychology, 77*, 229–243.
- Kooij, D., de Lange, A., Jansen, P., & Dikkers, J. (2008). Older workers' motivation to continue to work: Five meanings of age. *Journal of Managerial Psychology, 23*, 364–394.
- Kyriacou, C. (2001). Teacher stress: Directions for future research. *Educational Review, 53*, 27–35.



- Liu, X. S., & Ramsey, J. (2008). Teachers' job satisfaction: Analyses of the Teacher Follow-Up Survey in the United States for 2000–2001. *Teaching and Teacher Education, 24*, 1173–1184.
- Moore, W., & Esselman, M. (1992). Teacher efficacy, power, school climate and achievement: A desegregating district's experience. *Paper presented at the annual meeting of the American Educational Research Association, San Francisco.*
- Powdermaker, H. (1966). *Stranger and friend: The way of the anthropologist*. New York, NY: W.W. Norton.
- Ross, J. A., Cousins, J. B., & Gadalla, T. (1996). Within-teacher predictors of teacher efficacy. *Teaching and Teacher Education, 12*, 385–400.
- Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analysis. *Applied Psychology: An International Review, 57*, 152–171.
- Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology, 99*, 611–625.
- 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.
- Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey. *American Journal of Community Psychology, 13*, 693-713.
- Spickard, A., Gabbe, S. G., & Christensen, J. F. (2002). Mid-career burnout in generalist and specialist physicians. *Journal of the American Medical Association, 288*, 1447–1450.
- Stein, M. K., & Wang, M. C. (1988). Teacher development and school improvement: The process of teacher change. *Teaching and teacher education, 4*(2), 171-187.
- Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*, 202–248.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*, 783–805.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education, 23*, 944–956.
- Wolters, C. A., & Daugherty, S. G. (2007). Goal structures and teachers' sense of efficacy: Their relation and association to teaching experience and academic level. *Journal of Educational Psychology, 99*, 181–193.
- Woolfolk Hoy, A., & Burke Spero, R. (2005). Changes in teacher efficacy during the early years of teaching: A comparison of four measures. *Teaching and Teacher Education, 21*, 343–356.