

Administrative Support, Remuneration Policy and Faculty Teaching Efficacy in Vietnamese Higher Education

Minh-Quang Duong

University of Social Sciences and Humanities,
Vietnam National University of Ho Chi Minh City

10-12 Dinh Tien Hoang Street, District 1, Ho Chi Minh City, Vietnam
E-mail: duongminhquang@hcmussh.edu.vn

Received: August 24, 2017 Accepted: September 25, 2017 Published: October 5, 2017

doi:10.5296/ijld.v7i4.11876 URL: https://doi.org/10.5296/ijld.v7i4.11876

Abstract

The purpose of this study was to investigate university faculty's perceptions of teaching efficacy in Vietnam and the relationship of perceived administrative support and remuneration policy factors to faculty teaching efficacy was examined. Questionnaires measuring 27 items of six dimensions of teaching efficacy were distributed to 140 university faculty members, yielding 124 complete sets of responses. The results showed that the most faculty members were highly measured with their teaching efficacy and faculty members felt efficacious from the greatest to the least in the following dimensions: course design, class management, learning assessment, instructional strategy, technology usage, and interpersonal relation. In addition, administrative support and remuneration policy factors had significantly positive and negative effects on different dimensions of faculty teaching efficacy. The study's implications for university management were also discussed.

Keywords: Teaching efficacy, administrative support, remuneration policy, faculty member, higher education



1. Introduction

Teaching efficacy was developed in Bandura's (1997) social cognitive and self-efficacy theories which were four sources of efficacy expectation such as: mastery experience, verbal persuasion, vicarious experiences and physiological arousal. Bandura (1986) defined self-efficacy as "people's judgment of their capabilities to organize and execute courses of action required to attain designated types of performances" (p.31). The research of Bandura showed that self-efficacy is a key concept of social cognitive theory which was that behavior is best understood in terms of a triadic reciprocal system – consists of three items: cognition, environment, and behavior. Cook (1998) identified that "teaching efficacy is not only an observable behavior, but also rather an individual belief" (p.14).

Woolfolk Hoy (2004) defined that teaching efficacy is "a judgment about capabilities to influence student engagement and learning, even among those students who may be difficult or unmotivated (p.1). According to Tschannen-Moran, Woolfolk Hoy & Hoy (1998) teaching efficacy is considered as "teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (p. 232)

The selection of positive teaching behaviors, efficacious teachers tend to have high student achievement. Ross (1994) suggested teachers with high sense of efficacy tend to be more use:

1) new approaches, 2) management techniques, 3) help students who had low academic achievement, 4) develop students' academic skills, 5) set attainable goals, and 6) persist in the face of student failure. Similarly, Woolfolk Hoy (2004) showed that teachers with a strong sense of efficacy spend more time teaching in areas, and are more open to new ideas, more willing to experiment with new methods, more committed to teaching, and tend to exhibit greater levels of planning, organization, and enthusiasm (Allinder, 1994). Overall, teacher efficacy tends to engage in more productive, quality teacher behaviors.

Almost studies have focused on the teachers' teaching efficacy in the elementary and secondary schools (Lin & Gorrell, 2001; Tschannen-Moran & Woolfolk Hoy, 2002) and little is known about the faculty teaching efficacy in higher education (Cook, 1998). However, there are some studies on effective teaching in higher education to focus on teaching conceptions. The research of Brown (1993) measured faculty teaching efficacy in five factors, including course design, use of media, class management, teacher-student interaction, assessment and feedback to students. According to Mehdinezhad (2012), faculty members' self-ratings of their teaching efficacy clustered around six teaching self-efficacy factors: subject matters or content knowledge, curriculum and instruction knowledge, interaction or communication competencies, evaluation of learning or assessment, knowledge of the learning environment and implementing technology in the curriculum. In this study, we used 27 items of six factors of teaching efficacy by research of Chang, McKeachie, and Lin (2010). They included course design, instructional strategy, technology usage, class management, interpersonal interaction, and learning assessment. The faculty teaching efficacy in this study is defined by Chang et al. (2010) as the faculty members' judgment of their capabilities in course design, instructional strategy, technology usage, classroom management, interpersonal



relation, and learning assessment.

Several studies showed that there were related factors influencing faculty teaching efficacy. Studies have shown that teaching efficacy affected student achievement (Esterly, 2003), student success (Tournaki & Podell, 2005; Woolfolk-Hoy & Davis, 2006), student learning motivation (Nolen, Ward, Horn, Campbell, Mahna & Childers, 2007), and student effectiveness (Usher & Pajares, 2006). Research of Goddard, Hoy and Woolfolk Hoy (2000) demonstrated that faculty teaching efficacy is related to students' academic achievement. intrinsic motivation, and learning efficacy. Tschannen-Moran, Woolfolk Hoy and Hoy (1998) identified that teacher efficacy has been connected with student attitudes, teachers' classroom behaviors, teachers' attitudes, teacher stress and burnout, and teachers' willingness to implement innovation. Furthermore, Research shows that teaching efficacy related to different psychological factors of the instructor, such as willingness to accept new ideas (Brouwers & Tomic, 2003; Ross & Bruce, 2007), spend time for teaching per semester (Kim, 2009), and teacher assessment (Gkolia & Belias, & Koustelios, 2014; Carara, Barbaranelli, Steca, & Malone, 2006), classroom management behavior (Giallo & Little, 2003), responsibility for student learning (Darling-Hammond, Chung, & Frelow, 2002), trust and openness (Goddard, Hoy, & Woolfolk-Hoy, 2004), and happiness of teacher (Mehdinezhad, 2012). However, very few studies have been done on the relationship between faculty teaching efficacy and factors of remuneration policy and administrative support.

It is clear that very few studies have been conducted in the area of teaching efficacy in Vietnamese higher education sector. The findings of this study, therefore, contribute to fill in the literature gap of faculty teaching efficacy in higher education. The present study focuses on the following research questions: 1) What is the general level of faculty teaching efficacy in Vietnam? and 2) How is faculty teaching efficacy affected by remuneration policy and administrative support factors?

2. Method

2.1 Sample

As a result, questionnaire was distributed to 140 faculty members who were drawn from faculty members to working full-time in the University of Social Sciences and Humanities (USSH) - one of six member universities of Vietnam National University of Ho Chi Minh City (VNU - HCM) and 124 questionnaires were returned for 88.6% return rate which exceeded the 30% response rate to most researchers for analysis purpose (Dillman, 2000; Malaney, 2002). All data of respondents were self-reported information which was prevalently used in higher education research (Gonyea, 2005). Out of the 124 faculty members in the USSH-VNUHCM, the 5 of these were chosen for open-ended questions which done using a face to face interview.

2.2 Variables

Faculty teaching efficacy identified as the dependent variable in this study which was composed of 27 items of six dimensions including course design, technology usage, instructional strategy, classroom management, interpersonal relation, and learning assessment



(see Table 2). Factor analysis and internal consistency analysis (Cronbach's α) were conducted to assess the validity and reliability of this constructed measurement for faculty teaching in this study. Factor loading values for items designed to measure each factor were consistently large from 0.619 to 0.907 which were greater than the threshold level of 0.5 (Hair, Anderson, Tatham, & Black, 2006), showing that the twenty-seven items of six factors were all suitable for constructing teaching efficacy. A cumulative explanation from 61.25 to 80.11 percent of this study was greater than the threshold level of 60 percent (Hair et al., 2006). The internal consistency analysis yielded Cronbach's α coefficient from 0.830 to 0.895 in this study higher than the threshold level of 0.6 (Hair et al., 2006) and 0.7 (Nunnally & Bernstein, 1994), meeting the requirement of a constructed variable for social science research. Based on the validation of construct reliability which is concluded that research construct of teaching efficacy is reliable in this study.

The independent variables of this study encompassed two categories (see Table 1). The first was remuneration policy including items of insurance, faculty promotion, equality in school, salaries, bonus and welfare, in-service teaching training, and evaluation of teaching quality. The second was administrative support including items of care about teaching effectiveness, require high teaching quality, rewards quality teaching, involve teachers' idea, and concerned whether teaching load.

Table 1. Coding schemes and proportions of the independent variables in this study

Factors

1. Remuneration policy

Insurance: measured on a 5-point scale, where 1 = very dissatisfied, 2 = dissatisfied, 3 = sometime, 4 = satisfied, 5 = very satisfied (M = 3.44, SD = .89)

Faculty promotion: measured on the same scale as that for insurance (M = 3.39, SD = .89)

Equality in school: measured on the same scale as that for insurance (M = 3.28, SD = .89)

Salaries: measured on the same scale as that for insurance (M = 2.72, SD = 1.08)

Bonus and welfare: measured on the same scale as that for insurance (M = 2.76, SD = 1.07)

In-service teaching training: measured on the same scale as that for insurance (M = 3.20, SD = .85)

Evaluation of teaching quality: measured on the same scale as that for insurance (M = 3.28, SD = .75)

2. Administrative support

Care about teaching effectiveness: measured on a 5-point scale, where 1 = very dissatisfied, 2 = dissatisfied, 3 = sometime, 4 = satisfied, 5 = very satisfied (M = 3.52, SD = .87)

Require high teaching quality: measured on the same scale as that for care about teaching effectiveness (M = 3.79, SD = .76)

Rewards quality teaching: measured on the same scale as that for care about teaching effectiveness (M = 3.31, SD = .85)

Involve teachers' idea: measured on the same scale as that for care about teaching effectiveness (M = 3.43, SD = 82)

Concerned whether teaching load: measured on the same scale as that for care about teaching effectiveness (M = 3.45, SD = .87)



2.3 Data analyses

This study employed statistical methods of descriptive analyses and multiple regression analyses to analyze the data. Descriptive analyses of the mean and standard deviations were computed to understand the general level of teaching efficacy of faculty members in USSH-VNUHCM. A series of separate stepwise multiple regression analyses were conducted to analyze the effects of remuneration policy and administrative support factors on each teaching efficacy factors.

3. Results and Discussion

3.1 Teaching Efficacy of Faculty Members in USSH-VNUHCM

In this study, the survey used a 5-point scale with responses ranging from 1 = strongly disagree to 5 = strongly agree. Table 2 presents that the most faculty members were highly measured with their teaching efficacy (M = 4.14, SD = 0.52), mirroring the results of the studies by Chang, Lin, and Song (2011). The findings of Chang et al. showed that the average of the total score is 3.32 (measured on a 4-point scale) which could be regarded as high as measure on the scale. The research of Mehdinezhad (2012) measured teaching efficacy of faculty members in the following criteria: communication skills, assessment, subject matter, curriculum and instruction, learning environment, and implementing technology which measured on a 5-point scale. His research used other dimensions to measure faculty teaching efficacy, but the findings of his research show that the respondents rated their teaching efficacy in all factors as good (M = 4.23, SD = 0.65).

Table 2. The results of Means (M) and standard deviations (SD) of the faculty teaching efficacy level in the USSH-VNUHCM

Dimensions of teaching efficacy	M	SD	Rank
1. Course design	4.36	0.57	
Have sufficient professional ability	4.49	0.54	
Establish teaching objectives	4.33	0.86	
Select appropriate teaching material	4.34	0.64	1
Arrange appropriate timeline	4.22	0.74	
Prepare teaching material before class sessions	4.43	0.58	
2. Instructional strategy	4.14	0.66	
Utilize effective teaching methods	4.10	0.63	
Sustain students' attention	4.14	0.82	4
Inspiring and maintaining students' motivation	4.17	0.84	4
Utilize various inquiring skills	4.14	0.71	
3. Technology usage	3.96	0.59	
Utilize technology to enhance teaching	4.15	0.68	
Select appropriate teaching media	4.11	0.83	
Product relevant teaching media	3.85	0.76	5
Employ software relevant to teaching	3.82	0.68	
Operate various types of teaching apparatuses	3.89	0.77	



4. Classroom management	4.27	0.53	
Promote a democratic environment in class	4.39	0.59	
Nurture a pleasant learning environment	4.08	0.70	
Maintain a good relationship with students	4.39	0.56	2
Share personal experiences with students	4.20	0.84	
Listen to students	4.30	0.71	
5. Interpersonal Relation	3.89	0.77	
Provide assistance to students	3.92	0.86	
Co-assess learning results and advise students	3.82	0.88	6
Provide appropriate assistance to students	3.93	0.84	
6. Learning assessment	4.19	0.54	
Utilize a variety of assessment methods	4.22	0.84	
Assessment methods fit teaching objectives	4.15	0.67	
Provide students the opportunities for exercise	4.25	0.61	3
Assess students with positive methods	4.18	0.62	
Improve teaching from assessment results	4.19	0.61	
Total	4.14	0.52	

The findings of Table 2 also show that faculty members felt efficacious from the greatest to the least in the following dimensions: course design (M = 4.36, SD = 0.57), classroom management (M = 4.27, SD = 0.53), learning assessment (M = 4.19, SD = 0.54), instructional strategy (M = 4.14, SD = 0.66), technology usage (M = 3.96, SD = 0.59), and interpersonal relation (M = 3.89, SD = 0.77), and followed by. The results of this study were supported by researches of Chang, Lin, and Song (2011); Mehdinezhad (2012); Norton, Richardson, Hartley, Newstead, and Mayes (2005); and Paneque and Barbetta (2006). These results demonstrated that faculty members' score highest on teaching efficacy for course design and least satisfied in instruction strategy. For course design, the finding of this study was the same results with their research. They found that university faculty members are more oriented toward knowledge transmission.

The research used different methods, approaches and instruments to measure teaching efficacy for faculty members in higher education, thus, they have different results. The results of this study as opposed to their researches for instructional strategy which highly measured. There is still much room for university administrators to improve the level of satisfaction of students in the USSH-VNUHCM.

3.2 The Effects of Remuneration Policy and Administrative Support Factors on Faculty Teaching Efficacy

In Table 3, the findings were stepwise regression analyses to clearly present the effects of variable combinations on the teaching efficacy of the Vietnamese faculty members. The results present coefficients of β values, with $\beta > 0$ indicating a positive effect and $\beta < 0$ indicating a negative effect on the teaching efficacy. The different regression models had different explanation for teaching efficacy across different factors of remuneration policy and administrative support. The percentages of variance explained by the different combinations



of predictors are 30.6% for course design, 39.4% for instructional strategy, 36.8% for technology usage, 29.1% for classroom management, 58.1% for interpersonal relation, and 50.6% for learning assessment.

Table 3. Summary of stepwise regression analysis for perceived independent variables predicting teaching efficacy variables

Factors	Faculty teaching efficacy					
	CD	IS	TU	CM	IR	LA
1. Remuneration policy						
Insurance	.183	.018	.194	073	290*	.023
Faculty promotion	002	156	037	051	.092	012
Equality in school	169	.106	327*	.105	.240	.166
Salaries	038	336	199	294	241	353*
Bonus and welfare	.177	.450*	.222	.274	.455**	.333
In-service teaching training	233	083	207	078	207	.074
Evaluation of teaching quality	.100	.020	.046	.040	.047	113
2. Administrative support						
Care about teaching effectiveness	.489**	.612***	.390*	.585***	.623***	.499**
Require high teaching quality	274	488***	132	142	603***	094
Rewards quality teaching	.037	.252	.298*	.048	.165	.368**
Involve teachers' idea	280	275	127	128	208	348*
Concerned whether teaching load	.422**	.152	.241	.111	.381**	.210
R	.553	.628	.607	.540	.762	.712
R^2	.306	.394	.368	.291	.581	.506

Note. * p < .05, *** p < .01, *** p < .001. CD: Course design, IS: Instructional strategy, TU: Technology usage, CM: Classroom management, IR: Interpersonal relation, LA: Learning assessment.

For remuneration policy factor, items of insurance, equality in school, and salaries had significantly negative effects on different factors of teaching efficacy. For example, insurance had negative effect on interpersonal relation ($\beta = -.290$, p < .05), equality in school had negative effect on technology usage ($\beta = -.327$, p < .05), and salaries had negative effect on learning assessment ($\beta = -.353$, p < .05) factor of teaching efficacy. In contrast, bonus and welfare had a significantly positive effect on instructional strategy ($\beta = .450$, p < .05) and interpersonal relation ($\beta = .455$, p < .01). No other remuneration policy items showed significant effect on faculty teaching efficacy factors.

There is as yet no empirical research on the regression between remuneration policy factors and faculty teaching efficacy in Vietnam or even in other parts of the world. The finding of this study therefore, cannot be compared to the findings of others. For the relationship between remuneration policy factors and teaching efficacy, one faculty member elaborated,

In my opinion, most lectures indicated that beyond spent time in class for teaching, lectures spent more time for other work such as meeting with students, student support, edit exercise



for students, researches, projects... while the salary is very low... With the current salary level as well as supporting policies cannot feed the instructors and their families. That is a very alarming problem in Vietnamese higher education ... and ... If administrators have not good policies to support for lectures, it is very difficult to improve teaching quality and promote teaching effectiveness.

For administrative support factor, almost items of administrative support factor had significant positive and negative effects on faculty teaching efficacy. Care about teaching effectiveness item had significant positive effect on all dimensions of faculty teaching efficacy, including course design (β = .489, p < .01), instructional strategy (β = .612, p < .001), technology usage (β = .390, p < .05), classroom management (β = .585, p < .001), interpersonal relation (β = .623, p < .001), and learning assessment (β = .499, p < .01). As one faculty member admitted,

Although the administrator has an interest in teaching effectiveness, Self-lecturers will control the quality of their teaching in a variety of ways to improve quality, student achievement, and so on ... however ... these requirements are not commensurate with their remuneration.

Rewards quality teaching item had significant positive effect on technology usage (β = -.298 p < .05) and learning assessment (β = .368, p < .01), similarly, concerned whether teaching load had significant positive effect on course design (β = .422, p < .01) and interpersonal relation (β = .381, p < .01) factors of teaching efficacy. In contrast, require high teaching quality and involve teachers' idea items had significant negative effects on other factors of faculty teaching efficacy. For example, require high teaching quality had significant negative effect on instructional strategy (β = -.488, p < .001) and interpersonal relation (β = -.603, p < .001); involve teachers' idea had significant negative effect on learning assessment (β = -.348, p < .05) factor of faculty teaching efficacy.

The research of Chang et al. (2010) demonstrated that administrative support makes little contribution to teaching efficacy. When they encounter any difficulty or challenges in teaching, they would rather consult their colleagues than administrators. Thus, there are a distance between the lecturer and administrator. Chang et al. also showed that administrative support is not enough or does not meet what the faculty need. Unfortunately, there is as yet no empirical research on the regression/relationship between remuneration policy and administrative support factors and faculty teaching efficacy in Vietnam or even in other parts of the world. The finding of this study therefore, is very few in order to discuss or compare to the findings of others. Further research about the relationship between faculty teaching efficacy and remuneration policy and administrative support factors will contribute to fill in the literature gap.

4. Conclusion

Teaching efficacy of faculty members in higher education have a positive influence on teaching performance and students' learning achievement. Faculty members with a high sense of efficacy tend to exhibit greater levels of planning, organization, enthusiasm, spend more



time teaching in areas, more open to new ideas, more committed to teaching, and more willing to experiment with new methods.

The results showed that the most faculty members were highly measured with their teaching efficacy; however, there is still much room for university administrators to improve the teaching efficacy level of faculty members in Vietnamese higher education. This study has also demonstrated that university environment factors had significant effect on faculty teaching efficacy in Vietnam. The remuneration policy and administrative support factors had different effects for faculty teaching efficacy across different factors of faculty teaching efficacy. Hence, when university managers and policy makers want to improve a universal intervention to enhance faculty teaching efficacy, they should be notably concerned about both these factors.

The primary limitation is that only USSH-VNUHCM faculty members were sampled in this study, and thus, the results and implications should be applied with caution to faculty members from different levels of higher education institutes or academic disciplines. Further research should collect faculty member samples from various higher education levels and disciplines. It would be also interesting to examine the interaction between teaching resources and organizational culture factors on their teaching efficacy. The link between faculty teaching efficacy and other factors of teaching support, peer support, administrative support, job satisfaction, teaching quality... could be confirmed by direct observation in future studies.

This study suggests that administrators should be aware what their faculty really need for teaching while providing teaching support. It is hoped that the barrier to the teaching efficacy of faculty members are found in this study may be useful for university management to develop work environment and culture that would allow higher levels of faculty teaching efficacy and can contribute to a great extent to improve the level of faculty members in Vietnamese higher education.

Acknowledgements

I would like to acknowledge my sincere gratitude to anonymous, kindest support and help, valuable advice, synthesized comments on revision, and detailed editing throughout.

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. https://doi.org/10.1177/088840649401700203.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman.

Brouwers, A., & Tomic, W. (2003). A test of the factorial validity of the Teacher Efficacy Scale. *Research in Education*, 69, 67-79.



Brown, G. (1993). Effective teaching. In R. Ellis (Ed.) *Quality assurance for university teaching* (pp. 211-232). Bristol, PA: Open University Press.

Carara, G., Barbaranelli, C., Steca, P., & Malone, P. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: a study at the school level. *Journal of School Psychology, 44*(1), 473-490. https://doi.org/10.1016/j.jsp.2006.09.001

Chang, T. S., McKeachie, W., & Lin, Y. G. (2010). Faculty perceptions of teaching support and teaching efficacy in Taiwan. *Higher Education*, *59*, 207-220. https://doi.org/10.1007/s10734-009-9243-8

Chang, T. S; Lin, H. H; & Song, M. M. (2011). University faculty members' perceptions of their teaching efficacy. *Innovations in Education and Teaching International*, 48(1), 49-60. https://doi.org/10.1080/14703297.2010.543770.

Cook, P. (1998). *The influence of organizational characteristics of faculty teaching self-efficacy*. Unpublished doctoral dissertation. Vanderbilt University, Nashville, Tennessee.

Darling-Hammond, L., Chung, R., & Frelow, F. (2002). Variation in teacher preparation: How well do different pathways prepare teachers to teach? *Journal of Teacher Education*, *53*(4), 286–302. https://doi.org/10.1177/0022487102053004002

Dillman, D. A. (2000). *Mail and internet surveys: The tailored design method*. New York: John Wiley and Son.

Esterly, E. J. (2003). A multi-method exploration of the mathematics teaching efficacy and epistemological beliefs of elementary preservice and novice teachers. Unpublished Ph.D Dissertation, Ohio State University, Ohio.

Giallo, R., & Little, E. (2003). Classroom behavior problems: the relationship between preparedness, classroom experiences, and self-efficacy in graduate and student teachers. *Australian Journal of Educational & Developmental Psychology, 3*(1), 21–34.

Gkolia, A., Belias, D., & Koustelios, A. (2014). Teacher's job satisfaction and self-efficacy: A review. *European Scientific Journal*, 10(22), 321-342.

Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, W. (2000). Collective teacher efficacy: Its meaning measure, and impact on student achievement. American *Educational Research Journal*, *37*(2), 479-507. https://doi.org/10.3102/00028312037002479

Gonyea, R. M. (2005). Self-reported data in institutional research: Review and recommendations. In P. D. Umbach (Ed.), *Servey research: Emerging issues* (pp. 73-89). San Francisco, CA: Jossey-Bass.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (2006). *Multivariate data analysis*. New Jersey: Prentice Hall.

Kim, E. (2009). Beyond language barriers: Teaching self-efficacy among East Asian international teaching assistants. *International Journal of Teaching and Learning in Higher*



Education, 21(2), 171-180.

Lin, H. L., & Gorrell, J. (2001). Exploratory analysis of pre-service teacher efficacy in Taiwan. *Teaching and Teacher Education*, 17(5), 623-635. http://dx.doi.org/10.1016/S0742-051X(01)00018-X

Malaney, G. D. (2002). You still need high response rates with web-based surveys. *Student Affairs On-Line*, 3(1).

Mehdinezhad, V. (2012). Faculty members' understanding of teaching efficacy criteria. *Education Inquiry*, *3*(1), 49–69. HTTPS://DOI.ORG/10.3402/edui.v3i1.22013

Norton, L., Richardson, J., Hartley, J., Newstead, S., & Mayes, J. (2005). Teachers' beliefs and intentions concerning teaching in higher education. *Higher Education*, *50*(4), 537–571. HTTPS://DOI.ORG/10.1007/s10734-004-6363-z

Nolen, S., Ward, C., Horn, I., Campbel, S., Mahna, K., & Childers, S. (2007). *Motivation to learn during student teaching*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (2nd ed.). New York, NY: McGraw-Hill.

Paneque, O. M., & Barbetta, P. M. (2006). A study of teacher efficacy of special education teachers of English language learners with disabilities. *Bilingual Research Journal: The Journal of the National Association for Bilingual Education*, 30(1), 171-193. http://dx.doi.org/10.1080/15235882.2006.10162871

Ross, J. A. (1994). *Beliefs that make a difference: The origins and impacts of teacher efficacy*. Paper presented at the annual meeting of the Canadian Association for Curriculum Studies.

Ross, J., & Bruce, C. (2007). Professional development effects on teacher efficacy: Results of randomized field trial. *The Journal of Educational Research*, 101(1), 50-60.

Tschannen-Moran, M., & Woolfolk Hoy, A. (2002). *The influence of resources and support on teachers' efficacy beliefs*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Education Research*, 68(2), 202-248. https://doi.org/10.3102/00346543068002202

Tournaki, N., & Podell, D. M. (2005). The impact of student characteristics and teacher efficacy on teachers' predictions of student success. *Teaching and Teacher Education*, *21*, 299–314. https://doi.org/10.1016/j.tate.2005.01.003

Usher, E. & Pajares, F. (2006). Inviting confidence in school: invitations as a critical source of the academic self-efficacy beliefs of entering middle school students. *Emory University Journal of Invitational Theory and Practice*, 12, 7–16.



Woolfolk Hoy, A. (2004). Self-efficacy in college teaching. *Essays on Teaching Excellence: Toward the Best in the Academy, 15*(7), 8-11. Fort Collins, CO: The POD Network.

Woolfolk-Hoy, A., & Davis, H. (2006). Teacher self-efficacy and its influence on the achievement of adolescents. In F. Pajares & T. Urdan (ed.), *Self-efficacy beliefs of adolescents*, (pp. 117-13)8. Charlotte, NC: Information Age.

Copyright Disclaimer

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/4.0/).