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Perception of Teaching Efficacy by Primary and Secondary School Teachers

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Abstract

This research aims to identify how teaching efficacy is perceived by teachers working at state schools. Having a survey model design, this study hosts a total of 678 primary and secondary school teachers -401 females and 277 males- working in the province of Tokat during the academic year of 2013 and 2014. Research data has been collected through teaching efficacy scale consisting of 28 items and 6 sub-dimensions. Analyses have revealed that teachers mostly regard themselves as efficient especially in class management dimension. On the contrary, the dimension that participating teachers feel the least efficient has been determined to be instructional methods/strategies. Significant differences have been noted among teachers' perception concerning teaching efficacy across different variables such as the faculty they graduated, gender, course match, in-service training, branch, and seniority.

Keywords: Teaching efficacy, Primary school, Secondary school, Teacher training.

Introduction

Undoubtedly, teachers are the core figures in all teaching-learning processes. Thus, it is of paramount significance to select teachers, to train them, to designate them with teaching positions, and to offer them chances for self-improvement during their professional life. A perfect school, a perfect curriculum, and perfect students would make sense only with teachers doing their best at work. Teachers contribute dramatically to the learning settings not only with their skills and expertise, but also with their up-to-date world knowledge, values and philosophical backgrounds, and with their personal characteristics. Therefore, teachers have to be trained thoroughly and multi-functionally.

Good teachers are trained via good training programs. (MEB, 1982; Küçükahmet, 2001). The first institution to raise teachers was established in 1848, approximately 160 years ago, in our country. Meanwhile, tremendous changes have taken place in the training Because the quality of education is highly correlated with the quality of teachers, they have to be trained well both during pre-service years and in-service years, which is crucial

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for the quality of educational services (Şisman, 2001). Sönmez (2007: p. 149) underlies that teaching profession is an important occupation requiring special knowledge, skills, and interest, and that no one should be allowed to teach without proper pedagogic training. Ministry of National Education (1999) also underpins that teachers' features are directly influential on the quality of educational processes since they are the ones who constantly communicate with students, apply the instructional programs, manage learning, and who assess both the students and the instruction. Each component of teachers' characteristics has a crucial impact on students (Küçükahmet, 2001).

So far, countless studies have been designed to determine the qualities that a teacher should bear. These are as follows: a solid command of field and world knowledge, ability to use different techniques and methods, advanced communication skills to build up efficient and cozy atmosphere that is interesting for students, adaptive, hard-working, well-groomed, affectionate, a good organizer, open-minded, self-confident, tolerant, and fair (Barutçugil, 2002; Gündüz, 2007; Mujis & Reynolds, 2005; Özden, 1997, Şen & Erişen, 2002; Sönmez, 2007). According to Güneş (2003), effective teachers are those who think, question, criticize, who are innovative and open-minded, and who constantly update themselves with a great love for their profession. Likewise, Good and Brophy (1997) state that good teachers are innovative, democratic, enthusiastic, eager, and good at establishing positive relations with others. Based on their research, Çelikten and Can (2003) report that ideal teachers are tolerant, trustworthy, objective, innovative, open to criticism, success-oriented, time-efficient, cooperative with administrators and colleagues, and they build a constructive and educational discipline in the class where they include the students into all activities of class management.

Recently, a large body of research on teacher efficacy has focused on identifying how teachers from different fields perceive their self-efficacy in terms of their profession and their specialty. Shortly, self-efficacy is the awareness of one's skills to complete a task and the belief to succeed. Teachers' self-efficacy is a vital element in teacher training, and it matters significantly in terms of understanding how teachers' self-efficacy develops, what are its building blocks, what factors contribute to the formation of strong and positive teacher efficacy, and what kind of educational programs should be developed and how these programs should be used in order to help boost teachers' efficacy (Pajares, 1997). Studies on teachers' efficacy within the literature mainly revolve around examining self-efficacy in different fields across various variables (Akkoyunlu & Kurbanoğlu, 2003; Aksu, 2008; Azar, 2010; Çelikkaleli & Akbas, 2007; Kaya & Durmus, 2010; Klassen & Tze, 2014; Kurt & Ekici, 2013; Kutluca & Ekici; 2010; Lancester & Bain, 2007; Ören, Ormancı & Evrekli, 2011; Özdemir, 2008; Romi & Leyser, 2006).

Chang, Lin and Song's (2011) classification has served as the basis for the dimensions of teaching efficacy studied in this research. As for Chang, Lin and Song (2011), the concept of teaching efficacy bases itself onto Bandura's (1997) social-cognitive theory and self-efficacy theory. The first element of teaching efficacy as described by Chang, Lin & Song (2011) is course design. Saban (2000) discusses that the success of teaching is highly dependent on the consistency between planning of the goals in a course and the practice. Instructional methods/strategies applied by teachers are the second element in teaching efficacy, and they are mostly accountable for an effective learning process (Şahinel, 2003). Instructional methods are listed among the factors influencing students' success. The core responsibility of choosing and applying relevant instructional methods and techniques falls onto the teacher. The increase in the efficiency and productivity of any program is directly correlated with teachers' skills to fulfill this responsibility. On the other hand, there are many other factors affecting how teachers carry out the expected responsibilities. Among these is the awareness and implementation of teaching principles

and methods by teachers (Erden, 1998). What comes as the third in teaching efficacy is technology use, which is crucial for all current disciplines. It is common knowledge that technology use enhances the quality of learning and the efficiency of teaching, decreases the time both students and teachers need to attain their goals, lessens the cost of education without any loss of quality, and activates the students in the learning environment (Uşun, 2007). Öğüt, Altun and Koçer (2003) note that advances in info-communication technologies have also positively influenced the quality of education. Apart from enriching the quality of education, use of technology also helps raising individuals who are familiar with and able to use technology in their lives (Köseoğlu et al., 2007). Class management is the forth element of teaching efficacy. Establishing quality education and learning settings can be linked to efficient school and class management, which later can also be attributed with class management skills teachers have. Therefore, the quality of education is considerably dependent on the quality of class management (Şenturk & Oral, 2008). Interpersonal relations can be taken as the fifth element of teaching efficacy. Especially teachers, students, administrators, and other workers should be communicating effectively in order for education to properly actualize (Çilenti, 1998). A teacher with efficient communicative skills understands his/her students better, accepts them, and bears positive feelings. In such a setting, students, too, develop more positive attitudes and behaviours towards their teachers and peers (Kısaç, 2002). The quality of in-class communication plays a crucial role on students' personality development and academic success (Ergin & Birol, 2000). As for Chang, Lin and Song (2011), learning assessment is the final component of teaching efficacy. Assessment is regarded as the most important element of teaching process. Proper, trustable, and objective assessment requires valid and reliable evaluation tools, methods, and standards (Kayabaşı, 2007). According to Daniel and colleagues (1998), another feature that teachers should possess is a good command of skills and knowledge about assessment and evaluation.

Aim of Research

The aim of this research is to determine how primary and secondary school teachers perceive teaching efficacy. Accordingly, answers for the following questions have been sought:

1- How do teachers working at schools affiliated with the Ministry of Education perceive teaching efficacy?
2- Do teachers' perception of teaching efficacy vary across;
    a) The faculty they graduated from (education faculty vs. the others),
    b) Gender,
    c) Course Match,
    d) Training,
    e) Seniority, and
    f) Branch?

Method

Research Design

Examining primary and secondary school teachers' perception of teaching efficacy, this study has a survey model design. Survey model presents the findings in quantitative and numerical forms after identifying what the participants' attitudes and opinions are (Creswell & Miller, 2000).

Research Group

The research group of this study consists of primary and secondary school teachers working at state schools located within the province of Tokat during the academic year of

2013 and 2014. Teachers who filled in the questionnaire completely partook in the research (*N*= 678). Besides, branches with participants lower than 10 have also been excluded from the analyses.

Table 1 depicts the demographic information concerning the participants.

Table 1. *Demographic Information about the Participants*

Demographic Features		*N*	%
Gender	Female	401	59.1
	Male	277	40.9
Course Match	Full Match	202	30.6
	Partial Match	458	69.4
Training	Trained	524	79.4
	Not trained	136	20.6
Seniority	<6	142	20.9
	6-10	138	20.4
	11-15	215	31.7
	16-20	70	10.3
	>21	113	16.7
Branch	Mathematics	46	6.8
	Science	69	10.2
	Social Studies	113	16.7
	English Language	71	10.5
	Turkish Language	77	11.4
	Class Teacher	232	34.2
	Others (Arts, music, physical ed. Religion	67	11.5
	Missing Data	3	.4
Faculty	Education	536	79.1
	Others	142	20.18

Data Collection Tool

This research has employed the "*Teaching Efficacy Scale*" developed by Chang and colleagues (2010; 2011). Being a 4-point Likert type scale, the tool contains six dimensions (Course Design, Instructional Strategy, Technology Use, Classroom Management, Interpersonal Relation, and Learning Assessment) and 28 items. The Teaching Efficacy Scale was adapted to Turkish by the researcher. Factor loadings for designed to measure each factor were consistently range between .57 to .86. The six factors accounted for 71.93% of the total variance. Cronbach alpha values of the dimensions are as follows: course design *a*= .70, instructional strategy *a*= .76, technology use *a*= .81, classroom management *a*= . 67, interpersonal relations *a*= .73, and learning assessment *a*= .76.

Table 2. *Sample Items from Teaching Efficacy Questionnaire*

Dimension	Item #	Sample Items
Course Design (CD)	5	Establish comprehensive teaching objectives
		Select appropriate teaching material
Instructional Strategy (IS)	5	Teaching according to students' various levels of readiness
	5	Utilize effective teaching methods to improve students grades
Technology Use (TU)	5	Know how to produce relevant teaching media.
		Employ software relevant teaching media
Classroom Management (CM)	5	Nurture a pleasant learning environment,
		Maintain a good relationship with my students
Interpersonal Relation (IR)	3	Provide assistance to students whenever they encounter difficulties in learning
		Provide appropriate assistance to my students if they are incapable of completing the assignments
Learning Assessment (LA)	5	Utilize a variety of Assessment methods to evaluate students' learning results
		Improve my teaching according to assessment results

Data Analysis

Research data has been analysed via arithmetic mean, standard deviation, t-test (gender, faculty of graduation (Education / Others), match between background education and the courses, and participating in trainings), and one-way ANOVA (seniority and branch). The analysis of the quantitative data was conducted using parametric test. One-Sample Kolmogorov-Smirnov test was used to determine whether the data followed normal distribution and as a result it was found that the data followed normal distribution.

Findings

This part presents findings obtained after testing the research questions. All findings concluded after analyses are displayed in Tables and interpreted. The order of findings is the same with the order of research questions.

How do teachers perceive teaching efficacy?

Table 3. *Summary of Teachers' Perception Concerning Teaching Efficacy*

Dimensions	*M*	*sd*	Rank
Course Design	3.51	.33	2
Instructional Strategy	3.45	.40	6
Technology Use	3.47	.41	5
Classroom Management	3.67	.33	1
Interpersonal Relation	3.50	.43	3
Learning Assessment	3.48	.39	4

Note: 4 scale 4= Strongly agree 1=Strongly disagree

Table 3 depicts the summary as to how teachers perceive teaching efficacy. The dimension that teachers feel the most competent is classroom management (*M*= 3.67).

Course design *(M*= 3.51), interpersonal relations (*M*= 3.50), and Learning Assessment (*M*= 3.48) are the second, third and fourth dimensions that teachers feel efficient about. Instructional Strategy (*M*= 3.28) stands as the dimension that teachers feel the least efficient about.

Do teachers' perceptions of self-efficacy vary in terms of the faculty they graduated from?

Table 4 displays the comparison between teachers who graduated from faculty of education and the graduates of other faculties in terms of teaching efficacy perception. A statistically significant difference has been identified on three dimensions in favour of those who graduated from faculty of education; course design [$t_{(676)}$= 2.15, p<.05], classroom management *[*$t_{(676)}$=3.21, p<.05], and learning assessment [$t_{(676)}$= 2.72, p<.05]. Although participants with a degree from faculty of education have a higher mean score on instructional strategy, technology use, and interpersonal relations, this discrepancy is not statistically significant.

Table 4. *t-Test Results of Teaching Efficacy Scale in terms of the Faculty of Graduation*

Dimensions	Faculty of Education (*n*= 536)		Others (*n*= 142)			
	M	*sd*	*M*	*sd*	*t*	*p*
Course Design	3.53	.36	3.45	.39	2.154	.320
Instructional Strategy	3.46	.42	3.45	.39	.444	.657
Technology Use	3.48	.40	3.45	.45	.579	.563
Classroom Management	3.75	.32	3.65	.33	3.213	001
Interpersonal Relation	3.52	.43	3.46	.38	1.506	.133
Learning Assessment	3.50	.38	3.40	.40	2.720	.007

p< .05

Do teachers' perception of teaching efficacy vary in terms of gender?

Table 5. *t-test Results of Teaching Efficacy Scale in terms of Gender*

Dimensions	Female (*n*=401)		Male (*n*= 277)		*t*	*p*
	M	*sd*	*M*	*sd*		
Course Design	3.53	.37	3.51	.37	.285	776
Instructional Strategy	3.46	.42	3.44	.38	.573	592
Technology Use	3.47	.45	3.47	.39	.299	765
Classroom Management	3.71	.34	3.65	.32	2.133	.033
Interpersonal Relation	3.55	.46	3.48	.42	2.067	.039
Learning Assessment	3.57	.38	3.42	.39	4.862	.000

Upon analyzing teachers' teaching efficacy perception in terms of gender, no significant difference has been noted across dimensions of course design, instructional strategy, and technology use. However, a difference in favor of female teachers have been determined across the other dimensions; classroom management [$t_{(676)}$= 2.13, p< .05], interpersonal relations [$t_{(676)}$= 2.06, p< .05], and learning assessment [$t_{(676)}$= 4.86, p<.05].

Do teachers' perception of teaching efficacy vary depending on the match between their background education and the courses they teach?

Table 6. *t-test Results of Teaching Efficacy Scale in terms of Course-Match*

	Completely (*n*= 219)		Partially (*n*= 468)			
Dimensions	*M*	*sd*	*M*	*sd*	*t*	*p*
Course Design	3.64	.29	3.46	.38	6.094	.000
Instructional Strategy	3.53	.40	3.41	.39	3.455	.001
Technology Use	3.49	.38	3.46	.43	.930	.353
Classroom Management	3.71	.31	3.66	.34	1.893	.059
Interpersonal Relation	3.51	.47	3.50	.42	.386	.700
Learning Assessment	3.57	.36	3.44	.39	4.159	.000

As can be seen in Table 6, the dimensions of technology use, classroom management, and interpersonal relations are not significant affected by the match between teachers' background education and the courses they teach. As for course match, a statistically significant difference has been noted across the dimensions of course design [$t_{(676)}$= 6.09, p< .05], instructional strategy [$t_{(676)}$= 3.45, p< .05], and learning assessment [$t_{(676)}$= 4.15, p< .05] in favor of those teachers with a full match.

Do teachers' perception of teaching efficacy vary depending on attending a course about the professional?

Table 7 depicts teachers' teaching efficacy perception scores in terms of attending or not attending a course about the profession. As for partaking in a training course or not, only the dimension of classroom management is free from a significant difference. All the other dimension scores point a significant difference in favor of those who participated in a training course; course design [$t_{(676)}$= 6.00, p< .05], instructional [$t_{(676)}$= 5.58, p< .05], technology use [$t_{(676)}$= 5.76, p< .05], interpersonal relations [$t_{(676)}$= 2.34, p< .05], learning assessment [$t_{(676)}$= 4.08, p< .05].

Table 7. *t-test Results of Teaching Efficacy Scale in terms of Attending a Course about the Profession*

	Yes (*n*= 537)		No (*n*= 141)			
	M	*sd*	*M*	*sd*	*t*	*p*
Dimensions						
Course Design	3.56	.34	3.35	.42	6.000	000
Instructional Strategy	3.49	.39	3.28	.38	5.589	000
Technology Use	3.52	.39	3.29	.45	5.767	000
Classroom Management	3.68	.32	3.63	.37	1.182	238
Interpersonal Relation	3.52	.44	3.43	.40	2.341	020
Learning Assessment	3.51	.38	3.36	.38	4.088	000

p< .05

Do teachers' perception of teaching efficacy vary in terms of seniority?

A closer look at teachers' teaching efficacy perception in terms of changes based on seniority indicates a statistically significant difference across all the dimensions of the scale, but classroom management; course design [F= 5.47, p< .05], instructional strategy [F= 4.54, p< .05], technology use [F= 2.58, p< .05], interpersonal relations [F= 4.21, p< .05], learning assessment [F= 9.41, p< .05].

Teachers' teaching efficacy perception has been recorded to be the highest for teachers with more than 20 years and less than 6 years of experience. With respect to course design, the difference is in favor of teachers with less than 6 years of experience as opposed to those with 6-to-10, 11-to-15, and 16-to-20 years of experience. Furthermore, participants with more than 20 years of experience have also been identified to have higher teaching efficacy perception compared to those with 6-to-10 and 11-to-15 years of experience.

As for instructional strategy, a similar layout has been noted: teachers with less than 6 years and more than 20 of experience consider themselves more efficient than those with 6-to-10 and 11-to-15 years of experience, respectively.

Likewise, teachers with less than 6 and more than 20 years of experience have been recorded to be more efficient about technology use than those with 16-to-20, and 6-to-10 & 11-to-15 years of experience respectively.

Moreover, participants with 20 years of teaching experience regard themselves more efficient than those with 11-to-15 and 16-to-20 years of experience in terms of interpersonal relations.

Table 8. *ANOVA Results of Teaching Efficacy Scale in terms of Teaching Experience*

	< 6 (n= 142)		6-10 (n= 138)		11-15 (n= 215)		16-20 (n= 70)		>20 (n= 113)			Post hoc
Dimensions	*M*	*sd*	*M*	*sd*	*M*	*sd*	*M*	*sd*	*M*	*sd*	*F*	
Course Design	3.59	.35	3.46	.33	3.51	.36	3.38	.41	3.57	.38	5.47*	1>2;3;4 5>2;4
Instructional Strategy	3.51	.37	3.42	.41	3.47	.46	3.37	.38	3.54	.38	4.54*	1>2 5>2;3
Technology Use	3.51	.37	3.42	.42	3.47	.46	3.37	.38	3.54	.38	2.58*	1>4 5>2;4
Classroom Management	3.67	.33	3.73	.28	3.66	.33	3.62	.29	3.67	.40	1.57	
Interpersonal Relation	3.46	.47	3.53	.42	3.49	.40	3.39	.48	3.63	.40	4.21*	5>2;4
Learning Assessment	3.55	.35	3.39	.38	3.47	.37	3.35	.39	3.63	.42	9.41*	1>2;4 5>2;3;4

Not: 1=below 6 years, 2=6-10 , 3=11-15, 4=16-20, 5= above 20 years
p< .05

A similar finding has been determined with respect to learning assessment dimension of the scale; teachers with less than 6 years of experience feel more efficient than those with 6-to-10 and 16-to-20 years of experience, and participants with more than 20 years of experience consider themselves more efficient than those with 16-to-20, 11-to-15, and 6-to-10 years of teaching experience.

Do teachers' perception of teaching efficacy vary across their branches?

Table 9 shows that teachers' perception of self-efficacy vary significantly across all dimensions of the scale in terms of the branches they teach; course design [F= 2.97, p< .05], instructional strategy, [F= 5.58, p< .05], technology use [F= 4.09, p< .05], classroom management [F= 4.82, p< .05], interpersonal relations, [F= 4.82, p< .05], learning assessment [F= 5.09, p< .05].

As for course design, the difference in the scores is in favor of Turkish Language teachers as opposed to Social Studies teachers. With respect to instructional strategy and classroom management, mathematics teachers have been noted to have the highest score of teaching efficacy among all others. When it comes to technology use, English Language teachers have been determined to feel more efficient than class teachers. Besides, another significant difference has been recorded in favor of Class teachers, English Language teachers, and Turkish

Table 9. *ANOVA Results of Teaching Efficacy Scale across Branches*

	Class (n= 232)		Math. (n= 46)		Social Studies (n= 113)		Science (n= 69)	
Dimension	*M*	*sd*	*M*	*sd*	*M*	*sd*	*M*	*sd*
Course Design	3.50	.38	3.51	.33	3.47	.36	3.53	.32
Instructional Strategy	3.49	.39	3.61	.43	3.42	.34	3.33	.39
Technology Use	3.47	.42	3.45	.38	3.53	.44	3.28	.40
Classroom Management	3.67	.35	3.82	.26	3.66	.36	3.58	.32
Interpersonal Relation	3.51	.40	3.57	.38	3.50	.45	3.36	.45
Learning Assessment	3.57	.38	3.58	.29	3.37	.38	3.27	.38

	English (n= 71)		Turkish (n= 77)			
Dimension	*M*	*sd*	*M*	*sd*	F	Post hoc
Course Design	3.53	.31	3.58	.39	2.97*	6>3
Instructional Strategy	3.32	.44	3.50	.39	5.58*	2>1345; 6>5
Technology Use	3.605	.30	3.54	.41	4.09*	5>1 156>4
Classroom Management	3.66	.34	3.68	.32	2.60*	2>13456
Interpersonal Relation	3.43	.58	3.60	.41	2.15*	126>4, 36>5
Learning Assessment	3.46	.35	3.57	.44	6.46*	1>345, 56>43

Note: 1=Class Teacher, 2=Mathematics, 3=Social Studies, 4=Science, 5= English, 6=Turkish
p< .05

Language teachers compared to Science teachers. As for interpersonal relations, similarly, Class teachers, Mathematics teachers, and Turkish Language Teachers have scored higher than Science teachers. Moreover, another significant difference has been identified in favor of Social Studies teachers and Turkish Language teachers as opposed to English Language teachers. With respect to learning assessment, the figures in the table

indicate that the difference is in favor of Class teachers as opposed to Social Studies teachers, and also that Class teachers have higher teaching efficacy scores than both Science and English Language teachers. Finally, English and Turkish Language teachers have been determined to feel more efficient than Social studies and Science teachers.

Discussion and Conclusion

This research has examined teaching efficacy perception of teachers working at state primary and secondary schools. Classroom Management has been determined as the highest efficacy dimension for all the participants. Other dimensions in a descending order are course design, interpersonal relations, learning assessment, and technology use. The dimension that teachers feel the least efficient has been identified as instructional strategy. Similarly, Chang et.al. (2011) also concluded that instructional strategy is the least efficient dimension for faculty members. A teacher with weak knowledge on methods may easily end up instructing monotonous lessons (Celik, 2002: p. 120). Ozturk (2004) reports that teachers continue to employ traditional methods in their classes. Soylu (2009) concludes that Mathematics teachers feel efficient with traditional methods but not with contemporary ones. Teachers working at all levels of education are expected to attract students' attention and to help them retain information through use of various methods and techniques. Especially the success of programs designed in accordance with constructivist approach depends highly on teachers' skills in employing methods and techniques based on student-centered activities. Aslantas (2011) reports that instructional strategies-methods and techniques, communication, and assessment and evaluation skills are teachers' weaknesses. Furthermore, other studies also point that teachers are not good at using methods and techniques compatible with student-centered approach, and they often resort to traditional methods. Yesilyurt (2013) and Akcadag (2010) conclude that teachers are in need of further training about teaching methods and assessment and evaluation.

In this research, teaching efficacy has been analyzed across six dimensions. Many other studies focus on only one of the dimensions for teachers of different branches and teacher candidates. Results that other studies have concluded so far are as follows. Duran, Mihladiz & Balliel (2013), who focused on the dimension of assessment and evaluation which happens to be the fourth efficacy field in this research, state that teachers' efficacy levels concerning alternative assessment and evaluation procedures are generally high. On the contrary, Gelbal, Kelecioğlu (2007) report that teachers mostly use traditional assessment methods and they need extra training about assessment and evaluation techniques. In this study, course design has been identified as the second highest efficacy dimension for teachers. Gozutok, Akgun and Karacaoglu (2005) conclude that teachers go through serious problems regarding instructional planning skills. Interpersonal relations have been noted to be the third dimension of efficacy for the participants in this study. Likewise, Bagci (2007), Gonen and Kocakaya (2006), Yıldırım and Demir (2003), and Pehlivan (2005) also report that teachers feel efficient about communication skills.

A comparison of teaching efficacy perception between the graduates of education faculties and those of other faculties yields that graduates of education faculties feel more efficient about course design, classroom management, and learning assessment. Since students at education faculties take comprehensive courses about all the dimensions of the scale and they consider themselves as teachers during undergraduate years, this result is not surprising at all. With respect to gender, the difference is in favor of female teachers in terms of classroom management, interpersonal relations, and learning assessment. However, Seferoglu (2004) states that there is no difference between female and male teacher candidates in terms of teaching efficacy. On the other hand, Ozdemir (2008; 2009), Dilci (2012) express that female teacher candidates have a higher efficacy perception

about methodology than males. As for the match between teachers' background education and the courses they teach, the significant difference is in favour of those with a full match in terms of course design, instructional strategy, and learning assessment. With respect to attending a professional course, those teachers who partook in training have higher levels of teaching efficacy perception across all dimensions, but classroom management. Unver and Demirel (2004) report that teacher candidates who attended the training sessions organized by the authors improved their planning skills. Karacaoglu (2008) also states that teachers participating in in-service training have higher levels of teaching efficacy perception. Considering the seniority of participating teachers, results point to statistically significant differences across all the dimensions of the scale, but classroom management. On the whole, teachers with less than 6 and more than 20 years of experience have been noted to have higher levels of teaching efficacy perception. This result may be explained as follows; relatively new teachers are more enthusiastic to teach what they learned during their education and to prove themselves, and teachers with more than 20 years of experience feel efficient due to their long years of working life. Yet, Dilci (2012) reports that seniority does not lead to any difference in teaching efficacy perception. Lastly, teachers' perception of teaching efficacy has been determined to vary across all dimensions in terms of the branches they teach. Similarly, Ozdemir (2008) and Karacaoglu (2008) also conclude that teachers' efficacy levels differ across various branches.

It was required that teachers have three main efficacy; general cultural knowledge, field knowledge and professional teaching knowledge in our country. The teaching efficacy of teachers examinated in the study associated with teaching profession. Celebi (2004) expressed that teachers efficacy should have include course design, instructional method/ strategy, class management, communication skill, learning assessment according to MEB. Teaching efficacy classification performed by Chang and colleagues (2010; 2011) similar to this teaching efficacy classification. Only difference from classification performed Chang and colleagues (2010; 2011) were the lack of in the use of technology. Additionally, teacher training programs have been included more technology courses. It was expected that primary/secondary school teachers more use technological materials in our country.

Recommendations

As mentioned earlier, instructional methods/strategies have been noted as the weakest point of efficacy for the participating teachers. Therefore, it may be wise to increase the amount of relevant courses during undergraduate education. Apart from principles and methods of teaching course, other compulsory courses focusing on active learning methods and techniques may be incorporated into the curriculum, and these classes may be taught based on practice. Since the graduates of education faculties have higher levels of teaching efficacy perception, appropriate regulations may be mandated to employ only the graduates of education faculties as teachers. Moreover, teachers should be encouraged to teach only the courses within their branch because participants with a full match have been identified to have higher levels of efficacy perception. Teachers may be offered opportunities (such as graduate studies) to improve themselves in accordance with their interests and needs.

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