



## Gender effect on classroom management skills and competencies of teachers: A meta-analysis study

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### Abstract

This study aims at determining the effect sizes of perceptions and opinions of teachers regarding classroom management skills and competencies according to their gender. 19 journal articles out of 28 journal articles specializing on teachers' classroom management skills and competencies in Turkey downloaded from the national thesis archives of Higher Education Institution appropriate to inclusion criteria are included in the study. Also, moderators which could not be included to the assessment of primary researches as publication type, publication year, region where study conducted, educational level, school type, scale type, branches of the teachers and gender of the researcher moderators were analyzed as variables. As a result, according to fixed effects model ( $d=0,149$ ) and random effects model ( $d=0,133$ ) in favor of female teachers, effect size was statistically significant. Moderator analysis revealed that publication type ( $p=0,001$ ), type of scale (either ready or improved) ( $p=0,049$ ) and validity and reliability studies ( $p=0,008$ ) were found as moderators. Furthermore, effect sizes of researches showed that gender awareness included a continuing tendency over the years. Moderator analysis showed that school type ( $p=0,054$ ), educational level ( $p=0,477$ ), region where research was conducted ( $p=0,075$ ), teachers' branches ( $p=0,257$ ) and gender of the researchers were not considered as moderators. As a result, it is recommended not to use gender as an important independent variable in studies in relation to teachers' perceptions and opinions on classroom management skills and competencies.

**Keywords:** Classroom management skills, classroom management competencies, meta-analysis, teacher, gender

### 1. Introduction

A classroom, which is structured as an educational environment for meeting educational objectives consists of students who share common characteristics according to their educational levels as critical and functional /elements of school system, and is a place where educational activities take

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place (Tutkun, 2006). A classroom environment is a product of physical arrangements, psychological state as well as social and cultural interaction among students which influence perceptions and evaluation of students (Özden, 2005). Classroom learning has been defined as the community learning which is intended for learners learn safely, feel respected and valued where they improve their new abilities and expertise (Burden, 2006).

Classroom management is the first and primary step of educational administration (Başar, 2003). Success in classroom management has closer relation to teacher's sensitivity on human relationships and teacher's having knowledge about the classroom management. Initially, teachers need to provide physical and psychological environment in the classroom. In order to manage a successfully physical and psychological environment, teachers need to excite greater interest in students. Emerging issues have stemmed from complex and multi-dimensional structure of the human relationships (Aydın, 2004).

Classroom management has aimed at cooperative work among learners and teachers as well as effective realization of teaching and learning process. Classroom management for teachers and students is not a state, but it is a process. This perspective proves that classroom management is much more than discipline as stated by Freiberg (2002). A narrow perspective on classroom management reveals that classroom management is the prevention and management of students' undesired behaviour. However, an effective teaching and learning process requires much more than the control of student behaviour. This change can be seen in the definitions of classroom management.

Meaning of classroom management as generated by Everson and Harris (1999), has been changed from disciplinary practices and behavioral interventions to a more holistic definition on supportive learning environment for creating and managing teachers' behaviours. Brophy (1999) believes that classroom management is a process and classroom management is a particular capacity for having an effective learning environment, which is managed by the most successful teachers. Erden (2008) defines classroom management as a process including various kinds of techniques and activities in order to create an effective learning environment and maintain effective student behaviours in parallel to the objectives of the teaching and learning process. Borko and Putnam (1995) believe that teaching strategies are part of classroom management skills of a teacher in order to set up rules and procedures of the classroom, to organize learning groups, to monitor learning of the students and events affecting the learning of the students, to arrange the possible learning pace and to manage misbehaviour that may arise, which Borko and Putman (1995) reveal that a successful teacher applies such kind of teaching strategies while managing the classroom. Finally, Larrivee (2005) indicates that teaching strategies as crucial elements of classroom management involve organizational structure as well as meaningful content and they support maximum productivity. These definitions reveal that classroom management is like an umbrella as indicated by Reuport and Wodcock (2010).

The importance of classroom management is closely related to the effect on classroom management over teaching. Various research results reveal that teachers have direct effect on students' learning and effective classroom management (Liu & Lin, 2007; Stichter et al., 2009; Adeyemo, 2012). Similarly, meta-analysis of 91 studies find that classroom management is one of the most influential factors on students' learning (Haertel & Walberg, 1993). Teachers' classroom management practices have a positive and significant effect for reducing the misbehaviour in the classroom. An experimental study based on the results of 12 researches result that students in the experimental group are less disruptive, less inconvenient and less aggressive than the learners in the control group (Oliver, Wehby, & Reschly, 2011). Teachers' classroom management and skills over the students in the experimental group are found to be higher. Effective teaching and learning is

impossible to carry out in a classroom where classroom environment is weaker. Key components of the effective classroom management are accepted as 1. Rules and procedures, 2. Discipline, 3. Teacher-student relationships, 4. Teachers' mental framework in the literature (Marzano, Marzano, & Pickering, 2003).

Classroom management is not a gift for some teachers. Indeed, it is not a gift by birth. Since some teachers apply classroom management techniques easily, classroom management is still a skill. A skill should be applied for displaying a competency. Although there is a rich literature regarding theoretical knowledge on classroom management, literature does not present a rich data regarding practical skills of teachers for supporting their own lifelong professional development. Many teachers try classroom management strategies spontaneously and inconsistently. When their request is not met, they mostly feel discouraged. Effective classroom management requires effective skills on planning, organization and reflection as well as team work and motivation. Fajet, Bello, Leftwich, Mesler and Shaver (2005) find that teachers' initial perceptions on classroom management have actually been generated during their initial teacher trainings. Second, teachers observe and teach learners for gaining and developing skills on classroom management (Allen, 2010). Finally, teachers gain in-depth skills on classroom management during their initial teacher trainings. Also, in-service trainings, courses on personal professional development, colleague interaction and graduate studies can be ways of improving classroom management skills of teachers.

Teachers as effective classroom managers are expected to prepare classroom environment for teaching and learning process, determine on the classroom rules and establish an effective learning environment for adoption of rules by the students, organize and maintain teaching and organize behaviours of teachers (Erden, 2008). Experienced and inexperienced teachers who leave the profession due to classroom discipline problems feel frustration, anger and helplessness because they do not feel ready to real classroom experiences although they spent considerable amount of time for gaining classroom management skills during their initial teacher trainings (Miech & Elder, 1996). Managing behaviours of students is clearly a complex process. Teachers are required to be full of skills (Krause, Bochner, & Duchesne, 2003). There is a positive correlation between what tendencies teachers have on classroom management and how they manage the classroom (Turanlı & Yıldırım, 2007).

Classroom management is a process for creating effective classroom and a dimension for effective teaching (Good & Brophy, 1997). It especially focuses on students' behaviours for overcoming disciplinary problems, lower level of motivation on learning and poor self-esteem of the students (Campbell, 1999; Evans, Harvey, Buckley, & Yan, 2010).

Martin and Yin (1997) see classroom management as multidimensional. These dimensions are called managing teaching, managing learners and managing behaviours. Studies on identifying the differences between classroom management and gender among the dimensions reveal that there is a significant difference between managing teaching and managing behaviours in favour of male teachers. Akbaba and Altun (1998) find that teachers' tendency to classroom management is suitable for interventionist approach rather than transactional approach. Newly graduated teachers' and male teachers' classroom management approaches have tendency to be more intrusive. Martin, Yin and Mayall (2006) reveal that there is a significant difference between classroom management approaches of female and male teachers. Female teachers' approaches seem to be more intrusive than male teachers' approaches.

Various results are obtained from studies throughout literature comparing classroom management skills and competencies of teachers who are compared according to their genders. Some studies

reveal that teachers' perceptions and opinions regarding their classroom management skills and competencies have been affected by their gender (Yüksel, 2013; Ünlü, 2008; İlgar, 2007; Tunca, 2010; Korkut, 2009; Aksu, 2009; Çelik, 2006). Results of some studies yield that there are not any significant differences and decisive roles between male and female teachers' classroom management skills and competencies (Uç, 2013; Koçoğlu, 2003; Sivri, 2012; İlhan, 2011; Bağcı, 2010; Aluçdibi, 2010; Güner, 2010; Hayva, 2010; Kaya, 2008; Burç, 2006; Akkaya, 2011; Güvenç, 2012).

Number of qualitative and quantitative studies regarding classroom management and competencies of teachers in Turkey has been increasing day-by-day. In such qualitative and quantitative studies on classroom management and competencies of teachers, various kinds of scales are used and different independent variables (gender, branch, marital status, educational level, faculty graduated and seniority, etc.) are used. As a result of these studies, statistically significant and non-significant conclusions as well as significant differences on independent variables of sub-groups are drawn. Meta-analysis studies are essential for synthesizing the results of these studies, showing a direction to new studies regarding teachers' perceptions on classroom management skills and competencies.

It is necessary to synthesize the results for managing various results regarding classroom management skills and competencies. Therefore, these studies have suggested that meta-analysis studies on classroom management skills and competencies of teachers should be conducted. In recent years, increasing number of studies on classroom management skills and competencies of teachers at schools reveal the need for compiling the results of studies taking into account number of samples, drawing common results and synthesizing the practical experiences. Examining the literature, since there is not any study encountered regarding classroom management skills of teachers through meta-analysis method, this study will contribute to have an original study domestically and to conduct studies using different variables. In this context, this study aims at identifying whether there is a difference between effect sizes among some variables ignored in primary studies and whether there is a difference between effect sizes on classroom management skills and competencies.

## 2. Aim of the Study

This study aims at determining the effect sizes of perceptions and opinions of teachers regarding the classroom management skills and competencies according to their gender.

## 3. Method

This section contains information about the research design, data collection and data analysis.

### 3.1. Research Design

Meta-analysis method as one of the methods used for synthesizing the research results has been applied as the research design of the current study. Meta-analysis uses advanced statistical techniques to analyze, synthesize and interpret independent quantitative findings. The purpose of a meta-analysis is to reveal facts on similar topics, combine findings of several studies conducted at various times and places, reach the most accurate quantitative results through increasing sample size (Cumming, 2012; Ellis, 2012; Hartung, 2008; Kış, 2013; Yıldırım, 2014). Current study is applied a statistical pocket programme of 2.2.064 version for Meta-Analysis [CMA-Comprehensive Meta Analysis] for comparing effect sizes of each study with variances and groups. SPSS version 20.0 pocket programme has been used from coder reliability.

### 3.2. Data Collection

Primary data source of the current study constituted Master's and Doctoral thesis in Turkey on teachers' perceptions and opinions regarding classroom management skills and competencies. Reaching these studies, key words on "classroom management skills" and "classroom management competencies" were used for scanning related thesis from the national thesis archives of Higher Education Institution. Scanning results revealed that 30 studies were found regarding the related topic, but only 19 of them were taken into consideration, which had open access by online and met the inclusion criterion.

Following inclusion criterion were met for the current study:

(i) *Criteria 1: Including published or unpublished resources:* Master's and Doctoral thesis were taken into consideration.

(ii) *Criteria 2: Having relevant research method:* In order to achieve the effect size in meta-analysis studies, empirical studies and female-male groups as variables were taken into consideration.

(iii) *Criteria 3: Including enough numerical data:* In order to calculate effect size required for every meta-analysis study, sample sizes, mean, standard deviation, F value, t value,  $X^2$  value, values of Kruskal Wallis and Mann Whitney U and p value were taken into consideration for female and male teacher groups.

11 of the studies were not involved into the current study because they did not include enough statistical data and they included different samples (managers, faculty members). Sample of the current study was limited to the findings of 19 studies included as well as Master's and Doctoral thesis regarding the topic conducted in Turkey from 2006 to 2013.

*Reliability of the Study:* The study's ID and content as well as protocol on coding the data were created.

In order to provide coders interrater reliability for the provision Coding Protocol, "the content of the study" section and in order to make sure on what needs to be done, interrater reliability analysis form were both used in order to do codings by a second person having sufficient knowledge on coding. Primary encoder was the researcher on his own. In order to maintain interrater coders, Cohen's Kappa statistics was used and reliability was found 0,88. These results proved having almost perfect match between coders.

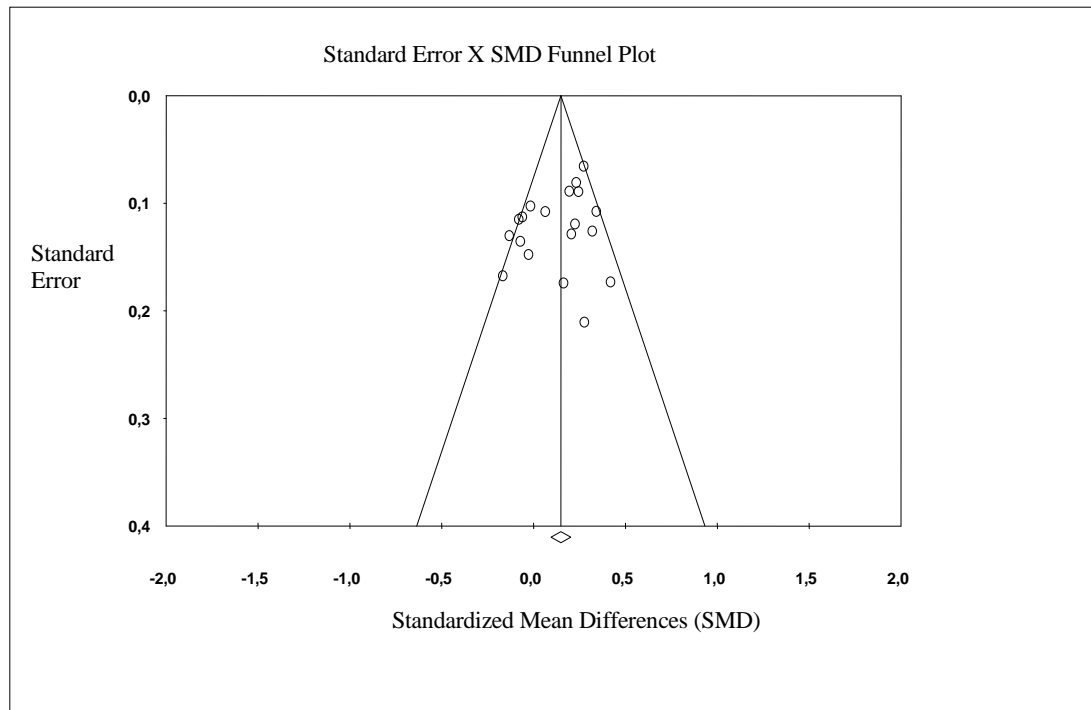
*Validity of the Study:* 19 studies, meeting the inclusion criteria, included in the current study all were determined on the validity of the data collection tools.

### 3.3. Analysis of Data

In the current study, for calculating the effect size of each study and their variances as well as group comparisons, statistical package program on meta-analysis for CMA version 2.2.064 [Comprehensive Meta Analysis] (Borenstein and all., 2005) was used. In the study, females were included the experimental group and males were included the control group. Therefore, if calculated effect size was positive, then it was in favor of females, if calculated effect size was negative, then it was in favor of males. For coding reliability test, SPSS version 20.0 was applied. Studies, meeting the inclusion criteria and were included for the current study, had 0,05 significant level. Therefore, significance level of the statistical analysis was determined at 0,05 level.

#### 4. Findings

Analysis was completed on studies meeting the inclusion criteria for this study in order to sought answers to the research questions. As a result of the analysis, findings in relation to publication bias, descriptive statistics, forest plot, fixed effects findings; homogeneity testing, random effects model findings and moderator analysis were explored in this section.



**Figure 1.** Scattered Funnel Plot, including size effect of studies showing differences in perceptions on teachers on classroom management skills and competencies according to their gender

Figure 1, the majority of 19 studies included in the current study was located towards the top of the figure and in a position closer to the combined effect size. In case of having absence of publication bias, studies were expected “to spread symmetrically in both sides of vertical line showing the combined effect size” (Borenstein et al., 2009, p. 284). If 19 studies included in the current study had publication bias, then most of the studies should have been “located bottom of the funnel plot and/or they should have been located only a portion of the line” (Borenstein et al., 2009, p. 284). In this sense, scattered plots of the funnel showed that the studies involved in the current study did not involve any publication bias.

Testing the publication bias, Orwin’s Fail-Safe N calculation was also applied. Orwin’s Fail-Safe N is applied for “calculating number of missing studies in a meta-analysis study” (Borenstein et al., 2009, p. 285). This analysis revealed that Orwin’s Fail-Safe N was calculated 16 respectively. The average effect size in meta-analysis of 0,149 at 0,1 level for reaching almost zero impact required 16 studies. However, 19 studies among all of the studies using qualitative, quantitative, theoretical and such kind of studies in Turkey, met the inclusion criteria. Since there were not any likely possibilities reaching next 19 studies other than 19 studies meeting the inclusion criteria for the current study, these studies as an indicator of this meta-analysis study proved that the current study did not have any publication bias.

#### 4.1. Uncombined Findings on Effect Size Analysis by Gender of the Teachers

Effect size, standard deviation and minimum and maximum limits of confidence interval (95%) on opinions of male and female teachers' regarding classroom management skills and competencies are explored in Table 1.

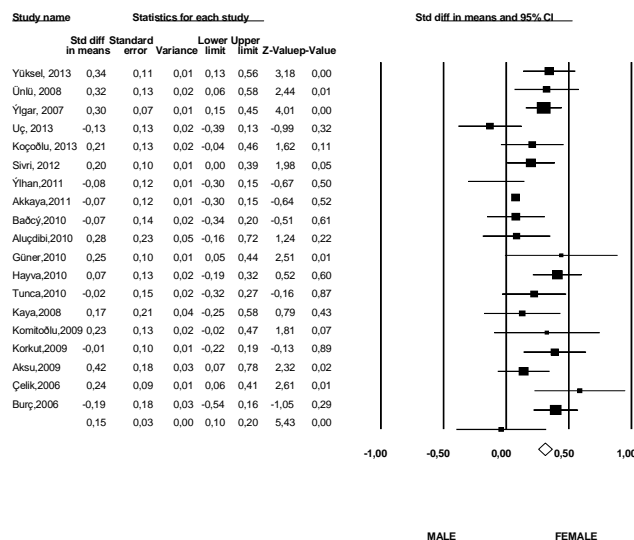
**Table 1.** Effect Sizes on Opinions of Teachers Regarding Classroom Management Skills and Competencies According to Their Gender

Model	Name of the Study	Effect		Variance	Minimum Limitations	Maximum Limitations	Z value	P value	Number of Samples	
		Size (d)	Standard Deviation						Female	Male
	Yüksel, 2013	0,344	0,108	0,012	0,132	0,556	3,184	0,001	159	191
	Ünlü, 2008	0,323	0,132	0,018	0,064	0,582	2,440	0,015	86	176
	İlgar, 2007	0,300	0,075	0,006	0,153	0,447	4,008	0,000	475	291
	Uç, 2013	-0,129	0,131	0,017	-0,385	0,127	-0,987	0,323	213	81
	Koçoğlu, 2013	0,209	0,129	0,017	-0,044	0,462	1,616	0,106	147	102
	Sivri, 2012	0,198	0,100	0,010	0,002	0,393	1,984	0,047	270	162
	İlhan, 2011	-0,078	0,116	0,013	-0,304	0,149	-0,672	0,502	153	147
	Akkaya, 2011	-0,074	0,116	0,014	-0,302	0,153	-0,640	0,522	172	130
	Bağcı, 2010	-0,069	0,136	0,018	-0,336	0,197	-0,509	0,610	141	88
	Aluçdibi, 2010	0,279	0,226	0,051	-0,164	0,721	1,235	0,217	74	27
	Güner, 2010	0,248	0,099	0,010	0,054	0,441	2,512	0,012	238	184
	Hayva, 2010	0,067	0,129	0,017	-0,185	0,320	0,522	0,602	119	122
	Tunca, 2010	-0,025	0,153	0,023	-0,323	0,274	-0,161	0,872	127	65
	Kaya, 2008	0,167	0,211	0,045	-0,248	0,581	0,788	0,431	47	43
	Komitoğlu, 2009	0,228	0,126	0,016	-0,018	0,474	1,815	0,070	238	87
	Korkut, 2009	-0,014	0,105	0,011	-0,219	0,191	-0,135	0,893	141	260
	Aksu, 2009	0,423	0,182	0,033	0,065	0,780	2,317	0,021	129	40
	Çelik, 2006	0,235	0,090	0,008	0,059	0,412	2,613	0,009	245	252
	Burç, 2006	-0,189	0,180	0,032	-0,541	0,163	-1,052	0,293	70	56
Fixed		0,149	0,027	0,001	0,095	0,202	5,426	0,000	3244	2504
Random		0,133	0,041	0,002	0,054	0,213	3,275	0,001	3244	2504

Standardized mean difference of 19 studies according to gender showed that value in favor of male teachers was calculated as -0,189 and value in favor of female teachers was calculated as 0,423 (see Table 1). There was not any significant difference among 11 studies whereas there was a statistically significant difference among 8 studies ( $p < 0,05$ ). Confidence interval of 17 studies ranged from -0,385 to 0,780.

#### 4.2. Forest Plot on Data including Gender

Forest plot on 19 studies meeting the inclusion criteria and studies including data regarding gender variable is shown in Table 2.



**Figure 2.** Forest Plot of the Effect Size on Teachers' Classroom Management and Skills according to Gender Variable

Figure 2 showed that part of lines in favor of females falling on the left-hand side of the graph, revealed that females receiving intervention reported bigger chances compared to males. Therefore, part of lines in favor of female teachers appeared to be greater than zero. Differences in favor of female teachers are interpreted that female teachers' classroom management skills and competencies are better than male teachers' classroom management skills and competencies.

### 4.3. Combined Findings on Fixed and Random Effect Model of Meta-Analysis regarding Effect Size on Teachers' Year of Service

Table 2 showed the maximum and minimum limits of combined average effect size (without removing contrary values), standard error and confidence interval of 95 % according to fixed and random effect size model regarding male and female teachers' perceptions on classroom management skills and competencies

**Table 2:** Combined Findings on Fixed and Random Effect Models of Meta-analysis Regarding Effect Size on Teachers' Gender and Homogeneity Test

Model	Effect Size and Confidence Interval of 95%						Heterogeneity			
	Number of Studies	Point estimate	Standard Error	Variance	Minimum Limit	Maximum Limit	Z Value	Q Value	df (Q)	I <sup>2</sup>
Fixed Effects	19	0,149	0,027	0,001	0,095	0,202	5,426	36,726	18	50,988
Random Effects	19	0,133	0,041	0,002	0,054	0,213	3,275			

Table 2 showed that fixed effect model on effect size of studies meeting the inclusion criteria according to gender variable revealed that the mean effect size value was calculated as  $d = 0,014$ , average effect size standard error was calculated as  $SE = 0,027$ , mean effect size confidence interval



upper limit was calculated as 0,202 and the lower level limit was calculated as 0,095. Data of 12 studies included in the current meta-analysis study according to calculations using the fixed effects model, showed that female teachers' perceptions on classroom management skills and competencies were higher than male teachers' perceptions on classroom management skills and competencies. However, as having effect size lower than 0,20, "effect size was found to be lower than Cohen's classification" (Cohen, 1988, p. 40). Using Lipsey's classification, when effect size is lower than 0,15, then much lower level of effect size can be expressed. Thalheimer and Cook's classification (2002) revealed that there was a negligible level of significance (-0,15-0,15).

Calculating statistically significant level according to Z test, Z value was found  $Z=5,426$ . The obtained result was determined for having a statistically significant p-value ( $p=0,005$ ). Only 4 studies out of 19 studies included in the current study according to gender variable having approximately similar results between minimum and maximum limits of mean effect size, obtained similar results whereas remaining 15 studies remained below or above these limits.

Q-statistics test of homogeneity was calculated as  $Q=36,726$ . 18 degrees of freedom at 95 % at significance level was found as 28,9 from  $X^2$  table. Q-statistics test of homogeneity was calculated as  $Q=51,901$ . As Q-statistics was exceeded 16 degrees of freedom and the chi-square distribution critical value ( $X^2_{0,95} = 28,9$ ), effect size distribution of homogeneity's null hypothesis at the fixed effects model was rejected. Therefore, effect size distribution according to fixed effect model was determined for having a heterogeneous characteristic.

$I^2$  developed as a complement of Q-statistics reveals a clear result on heterogeneity (Petticrew & Roberts, 2006; Yıldırım, 2014).  $I^2$  effect size indicates the proportion of the total variance. Unlike Q-statistics, number of studies does not affect  $I^2$ . Interpretation of  $I^2$  shows that there is 25% of lower level of heterogeneity, there is 50 % of average level of heterogeneity and there is 75 % of higher level of heterogeneity (Cooper and at. all, 2009). As a result of the homogeneity tests for gender variables (Q and  $I^2$ ), as average level heterogeneity is found between studies, for combining operation, the fixed model is changed to the random model. In order to identify the results of heterogeneity, moderator analysis results were given in Table 3.

**Table 3.** Categorical Moderator Results on Classroom Management Skills and Competencies' Perceptions Regarding Gender Effect

Moderator	k	d	SE	%95 CI	Q
Level of Education					0,505
Primary Level	17	0,144	0,028	[0,088; 0,199]	
Secondary Level	2	0,226	0,112	[0,006; 0,446]	
Publication Type					11,822
Master's Degree	16	0,096	0,031	[0,034; 0,157]	
Doctoral Degree	3	0,316	0,056	[0,206; 0,425]	
School Type					3,705
State School	15	0,114	0,033	[0,050; 0,178]	
State + Private School	4	0,229	0,050	[0,131; 0,327]	
Branch					2,717
Classroom Teacher	14	0,128	0,032	[0,065; 0,190]	
Branch Teacher	2	0,312	0,114	[0,088; 0,535]	
Classroom/Branch Teacher	3	0,179	0,061	[0,059; 0,299]	
Region where Study Conducted					8,495
Mediterranean	3	-0,017	0,074	[-0,162; 0,128]	
Eagean	3	0,186	0,059	[0,069; 0,302]	
Central Anatolia	7	0,211	0,091	[0,032; 0,389]	
Marmara	2	0,135	0,041	[0,054; 0,216]	
Turkey in General	2	0,274	0,079	[0,120; -0,459]	
Type of Scale					3,883

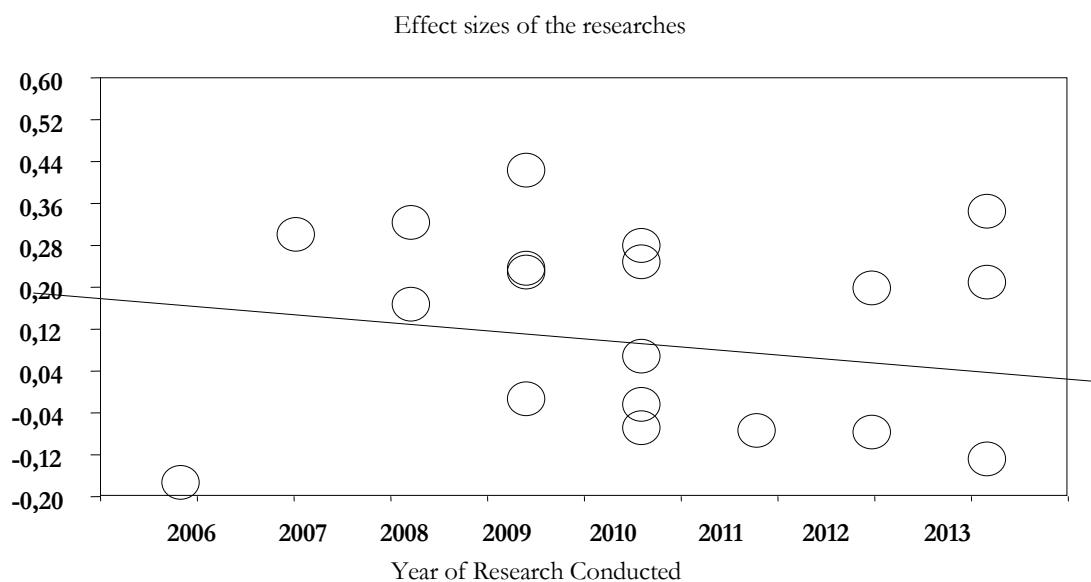
Ready Scales	12	0,103	0,036	[0,033; 0,173]	
Improved Scales	7	0,213	0,043	[0,129; 0,296]	
Scale's Reliability-Validity Studies					6,943
Yes	16	0,175	0,029	[0,118; 0,232]	
No	3	-0,052	0,081	[0,210; 0,107]	
Researcher's Gender					2,477
Male	5	0,216	0,051	[0,116; 0,315]	
Female	14	0,121	0,033	[0,057; 0,185]	

Note: k= number of studies, d= Cohen's d (Standardized Mean Difference), SE= Standard Error, CI= Confidence Interval, Q= Heterogeneity among studies, Comparative analysis of the studies having 2-and-above-sub-groups were maintained.

\* $p < .05$

Results on moderator analysis revealed that publication type ( $p=0,001$ ), scale type (either ready or improved) ( $p=0,049$ ) and reliability/validity of the study were found to be moderators. Doctoral thesis as publication type did not change direction of difference, but there was a significant difference in favor of females. When the researcher was male, direction of change was not changed in favor of females, but direction of change was increased in favor of females. In the studies using scales improved by the researchers, direction of difference was not changed in favor of female teachers whereas direction of difference showed an increase in the studies using ready scales. In the studies which reliability and validity studies were completed, direction of difference showed a significant difference in favor of males, whereas in the studies which validity and reliability studies were not completed, direction of difference showed a significant difference in favor of females.

Results on moderator analysis showed that school type ( $p=0,054$ ), level of education ( $p=0,477$ ), region where research was conducted ( $p=0,075$ ), branch of teachers ( $p=0,257$ ) and gender of the researcher ( $p=0,116$ ) were not found to be moderators.



**Figure 3:** Meta-regression results of effect sizes in accordance with year of studies conducted

## 5. Discussion, Conclusion and Recommendations

### 5.1. Discussion and Conclusion

In the current study, 19 effect sizes belonging to 19 studies with 5748 total numbers of samples of teachers were calculated. There were statistically significant differences found in 8 of the studies, whereas there was not any statistically difference found in 11 of the studies. The results of combining process at the Fixed Effects Model, it is found to be statistically significant effect size of 0,014 in favor of female teachers. The results of combining process at Random Effects Model, a statistically significant effect size of 0,133 in favor of female teachers was found. This finding also reveals a lower level of result when compared to Thalheimer and Cook's (2002) classification. While interpreting results together, teachers' perceptions and opinions on classroom management skills and competencies regarding their gender variable show that there is an unimportant level of significant difference in terms of social sciences. Therefore, future studies may not include gender as a variable. Due to absence of meta-analysis studies on teachers' classroom management skills and competencies according to gender variable, it seems impossible to compare the results obtained from the current study.

Research conducted by Opdenakker and Damme (2006) revealed that teachers' gender do not show a significant effect on classroom practices. The only difference in terms of gender is on students' integrating classroom practices into their learning. It is found that the level of female teachers' integrating classroom practices into students' learning has been lower than the level of male teachers' integrating classroom practices into students' learning. Interaction between components of teachers' gender and students' gender in classes, considers that there is a similar level degree of interaction between males and females. However, in classes where female students have much proportion than male teachers, then interaction with male teachers is much higher than interaction with female teachers. In classes where male students' proportion is much greater than female students, there is not any significant difference between interaction of male and female teachers.

Findings of another study reveal that there is not any significant difference between male and female teachers in terms of judging behaviours. Both male and female teachers have general tendency to judge the disruptive students in the same way (Salvano-Pardieu, Fontaine, Bouazzaoui, & Florer, 2009).

Results of the current study reveal that effect sizes regarding year of conducting studies have tendency to continuation on the teachers' being aware of gender in terms of studies' effect sizes. Having a significant difference among perceptions of teachers on classroom management skills and competencies regarding gender variable can be interpreted that teachers' gender in studies on classroom management skills and competencies is not an important independent variable to be taken into consideration. Recent studies also seem to support these findings. Studies conducted by Akın (2006) and Yıldız (2006) using non-parametric tests, which are not used for meta-analysis studies, it is found that gender is not an effective variable on classroom management. Similarly, according to the results of the current study, higher levels of significant difference on female teachers' classroom management skills and competencies may prove that the perception on saying "teaching profession has been accepted as a female profession" seems likely to be effective.

### 5.2. Recommendations

It is strongly recommended to explore further research studies to find out the reasons and to draw conclusions why there is a lower level of significant difference between teachers' gender variables

regarding their perceptions and opinions on classroom management skills and competencies as well as why female teachers have higher level of perceptions and opinions on classroom management skills and competencies than male teachers have. Similarly, obtained results on the current meta-analysis and well as obtained variables such as marital status, school type and seniority are recommended to use as predictors of classroom management skills and competencies apart from the variable called teachers' gender.

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*The studies including the symbol \* refers to the studies included in the meta-analysis.*

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