



EVIDENCE-BASED AND PROACTIVE CLASSROOM MANAGEMENT OF INCLUSIVE CLASSROOMS TEACHERS^{i,ii}

Ayfer Aslan¹ⁱⁱⁱ,

Bülbin Sucuoğlu²

¹PhD Student,

Gazi University,

Special Education Department,

Turkey

²Prof. Dr.,

Hacettepe University,

Faculty of Education,

Department of Basic Education,

Pre-School Education,

Turkey

Abstract:

This study examines the classroom management (CM) strategies applied by elementary school teachers in their inclusive classrooms. The study group comprised 14 primary school teachers, one student with special needs (SN) from the classroom of each teacher and an average student (AS) paired with the student with SN in terms of gender and age. Study data were collected using two observation forms, and a self-report instrument that the teachers used to evaluate their CM strategies. According to the study findings, the teachers scored highly in some evidence-based and proactive strategies, such as classroom organization, the use of reinforcements and giving directions, but recorded the lowest scores in identifying and teaching classroom rules, individualizing instructions, and using appropriate prompts. The teachers rated their classroom management as super, although an evaluation of all the findings revealed that teachers did not use some of the classroom management strategies that they claimed to use.

Keywords: inclusive classrooms; evidence-based strategies; proactive classroom management

ⁱ BÜTÜNLEŞTİRİLMİŞ İLKOKUL SINIFI ÖĞRETMENLERİNİN KULLANDIKLARI KANIT TEMELLİ VE ÖNLEYİCİ SINIF YÖNETİMİ STRATEJİLERİ

ⁱⁱ This article was produced from the master thesis of "Evidence-Based Classroom Management Strategies of Teachers in Inclusive Elementary Classrooms".

ⁱⁱⁱ Correspondence: email ayfr.aslan@gmail.com

Özet:

Bu çalışma, ilkökul öğretmenlerinin kaynaştırma/bütünleştirme sınıflarında uyguladıkları sınıf yönetimi (SY) stratejilerini incelemektedir. Çalışma grubu 14 sınıf öğretmeni, her öğretmenin sınıfından bir özel gereksinimli (ÖG) öğrenci ve bu öğrenciyle cinsiyet ve yaş açısından eşleştirilmiş ortalama bir öğrenciden (OÖ) oluşmaktadır. Araştırma verileri, iki gözlem formu ve öğretmenlerin SY stratejilerini değerlendirmek için kullandıkları bir öz değerlendirme formu kullanılarak toplanmıştır. Bulgulara göre öğretmenler, sınıfın işleyiş ve düzeni, pekiştirme ve yönerge verme gibi bazı kanıt temelli ve proaktif stratejilerde yüksek puan alırken, sınıf kurallarını belirleme ve öğretme, öğretimi bireyselleştirme ve uygun ipucu verme stratejilerinde en düşük puanları almışlardır. Öğretmenler kendi sınıf yönetimlerini çok iyi olarak değerlendirmiş, ancak tüm bulgular birlikte değerlendirildiğinde öğretmenlerin kullandıklarını iddia ettikleri sınıf yönetimi stratejilerinden bazılarını kullanmadıkları ortaya çıkmıştır.

Anahtar kelimeler: sınıf yönetimi, kanıt temelli stratejiler, önleyici sınıf yönetimi, kaynaştırma/bütünleştirme

1. Introduction

The term “classroom management” (CM) refers to a set of activities that are planned and implemented by teachers to foster and maintain a successful learning environment for all students (Brophy, 2006; Evertson & Weinstein, 2006). Stevenson, VanLone and Barber (2020) refer to CM as the skills, practices and strategies adopted by teachers for the effective teaching of the entire classroom or a small group, and for helping them acquire prosocial skills. Research has shown that classrooms that are managed effectively are those in which there is the least disruption, and where learning opportunities are at the utmost level for all students (Evertson & Emmer, 2013; Evertson & Weinstein, 2006; Kounin, 1970; Marzano, 2003; Marzano & Marzano, 2003). In addition, effective classroom management has been reported to have a positive impact on the learning and behaviors of every student, including those with SN (Soodak & McCarty, 2006; Marzano, Marzano & Pickering, 2003). Moreover, a significant correlation has been identified between the classroom management approaches of teachers and the academic performance and problem behaviors of their students (Durlak, Weissberg, Dymnicki, Taylor & Schellinger, 2011; Gage, Scott, Hirn & McSuga-Gage, 2018; Korpershoek, Harms, De Boer, Van Kuijk & Doolaard, 2016; Oliver, Wehby & Reschly, 2011). Another group of researchers (Wang, Haertel & Walberg, 1993) claimed CM to be an essential variable in student learning, and it has also been noted in the literature that teachers may have difficulties and limitations related to CM, with suggestions that this can have a negative effect on student learning while also contributing to the stress and burnout of teachers, leading to a reduction in job satisfaction (Alvarez, 2007; Domitrowich et al., 2016; Stevenson et al., 2020).

In CM research, two concepts have emerged: *Proactive classroom management* (PCM) and *evidence-based classroom management* (EBCM). PCM refers to a group of strategies used by teachers to improve student performance and to prevent problem behaviors (Carpenter & McKee-Higgins, 1996; Cook et al., 2018; Fossum, Handegerd & Drugli, 2017). According to the researchers, the use of PCM strategies rather than reactive strategies creates a positive classroom environment in which teachers focus on positive behaviors. PCM strategies such as organizing the physical environment, reinforcing positive behaviors, providing learning opportunities for all students and pre-correction are *evidence-based practices* that have been shown to improve academic performance and prevent problem behaviors in all students (Mitchell, Hirn & Lewis, 2017). EBCM strategies, on the other hand, are defined as practices whose effects have been evaluated using experimental research methods and whose effectiveness has been proven by at least three experimental studies published in peer-reviewed journals (Cook, Cook & Collins, 2016; Simonsen, Fairbanks, Bresch, Myers & Sugai, 2008).

Teachers who implement EBCM strategies are better able to manage their classrooms, the academic performance of their students improves and problem behaviors decrease (Simonsen et al., 2008). For example, providing students with learning opportunities (Lewis, Hudson, Richter & Johnson, 2004; Randolph, 2007) and active participation (Roderick & Engle, 2001; Willingham, Pollack & Lewis, 2002) improves their positive academic and social behaviors while alleviating problem ones. In addition, by providing prompts appropriate to the characteristics of the student, their reading (Rivera, Koorland & Fueyo, 2002) and transition skills (Schmit, Alper, Raschke & Ryndak, 2000) improve, and they become better able to engage in activities requiring multiple complex skills (Spriggs, Gast & Ayers, 2007). Moreover, pre-correction, which enables the prevention of predicted problem behaviors and the formation of desired behaviors (Colvin, Sugai & Patching, 1993), decreases negative behaviors and increases positive ones (İşcen-Karasu, 2017; Lewis, Colvin & Sugai, 2000). Finally, performance feedback improves the positive behaviors of every student in the classroom (Brantley & Webster, 1993).

2. Management of Inclusive Classrooms

Inclusion allows students with SN to receive education alongside their typically developing peers. The number of students with SN in regular classrooms has been increasing every year, and these classrooms are becoming increasingly diverse in terms of student characteristics (Soodak, 2003). Teachers often state that they are unable to effectively manage inclusive classrooms (Baker, 2005; Johansen, Little & Akin-Little, 2011; Friedman, 2006; Monsen, Ewing & Kwoka, 2014; Reinke, Stormont, Herman, Puri & Goel, 2011) and encounter difficulties in organizing their classrooms, teaching, engaging all students in activities and controlling problem behaviors (Akalin, 2015; Akalin & Sucuoğlu, 2015; Deniz & Çoban, 2019; Idol, 2002; Reinke et al., 2011; Sucuoğlu & Demirtaşlı, 2009). In inclusive classrooms, teachers often attribute the cause of problem

behaviors to the developmental disabilities of children, their specific needs and the characteristics of the parents. Accordingly, they try to come up with individual solutions to these behaviors (Akalin, 2015; Akcan, 2018; Ceylan & Yıkmiş, 2016; Sadioğlu, Batu & Bilgin, 2012), and this may lead to teacher behaviors that have been associated with the problem behaviors and poor performance of students (Akalin, 2007; McDannel, Thorson & McQuivey, 1998; Westwood, 1997), the teaching methods used (Clarfield & Stoner, 2005) and teacher-student interactions (Pianta, 2006) can be overlooked (Evertson, Emmer & Worsham, 2003; Ialonga, Poduska, Werthamer & Kellam, 2001; Reinke, Lewis-Palmer & Merrel, 2008; Soodak & McCarty, 2006). On the other hand, researchers often claim that teacher training programs do not provide teacher candidates with the necessary knowledge and skills for inclusion and classroom management (Oliver & Reschly, 2010; Mitchell et al., 2017; Stough, 2006). It has been suggested, therefore, that the success of inclusion will improve and difficulties related to classroom management may be reduced by periodically informing teachers about classroom management through pre-service and in-service training (Akalin & Sucuoğlu, 2015; Kantavong & Sivabaedya, 2010; Mitchell et al., 2017; Oliver & Reschly, 2007; Pas et al., 2015; Stough & Montague, 2015).

3. Motivation for the Study

Studies of CM in Turkey gained momentum at the end of the 1990s following the restructuring of faculties of education. Since then, the CM skills of teachers (Doğan, 2019; Özdemir, 2020; Sönmez & Receptoğlu, 2019), CM competencies (Erdoğan, 2019; Yıldız, 2020), the attitudes and beliefs as regards to CM (Buğday, 2010; Keskin, 2009; Ocakçı, 2020) and the way teachers deal with problem behaviors (Akman, Baydemir, Akyol, Çelik-Arslan & Kütükçü, 2011; Külekçi-Akyavuz, 2019) have been assessed. These studies have shown that CM knowledge and skills are limited (Çetinkol-Sarı, 2019; Işıkgöz, Yiğitsoy & Çiçekçe, 2018; Üstün, Bozkurt, Bayar & Sungurtekin, 2017), and that teachers generally encounter difficulties in the implementation of effective management strategies in their classrooms (Işıkgöz et al., 2018; Üstün et al., 2017).

In recent years, the challenges faced by pre-school and primary school teachers working in inclusive classrooms (Akalin, Demir, Sucuoğlu, Bakkaloğlu & İşcen-Karasu, 2014; Gök & Erbaş, 2011; Özaydın & Çolak, 2011; Varlier & Vuran, 2006; Vural & Yıkmiş, 2008) and dealing with the problem behaviors of students with SN (Akalin, 2015; Akcan, 2018; Gürgür & Hasanoğlu-Yazçayır, 2019; Karabıyık & Işıkdogan-Uğurlu, 2019) have led researchers to carry out studies into inclusive CM, in which it has been reported that elementary school teachers tend to opt for reactive strategies rather than PCM strategies in such classrooms (Akcan, 2018; Sucuoğlu, Akalin, Sazak-pınar & Güner, 2008; Sucuoğlu & Demirtaşlı, 2009; Sucuoğlu, Ünsal & Özokçu, 2004). It has further been reported that the knowledge of teachers of CM is quite limited (Güner, 2011; Işıkgöz et al., 2018) and they encounter difficulties in the management of their classrooms including students with SN (Akcan, 2018). Additionally, a significant correlation has been identified between

the behaviors of students with and without SN and teacher behaviors, and both the problem behaviors and on-task behaviors of students have been strongly associated with teacher behaviors (Akalin, 2007; Sucuoğlu, Akalin & Sazak-Pinar, 2010). In addition, inconsistencies can be seen between the CM of teachers evaluated based on in-class observations and those based on self-reported instruments or interviews (Çifci, Yıkmaş & Akbaba-Altun, 2001; Gangal, 2013; Şahin, 2012).

Previous literature has placed considerable importance on CM as a variable impacting the success of every student and their inclusion, and the effective use of empirically supported strategies by teachers (Wang et al., 1993; Simonsen et al., 2008; Simonsen, Freeman, Dooley, Maddock, Kern & Myers, 2017). In Turkey, CM is referred to in the Regulation of Pre-School Education and Primary Education Institutions (MoNE, 2019) only related to *student disciplinary action* and *problem behaviors*, and only for secondary school teachers. On the other hand, in-service training programs for teachers carried out by the Ministry of National Education (MoNE) fail to meet the needs of teachers related to the management of inclusive classrooms (Akalin & Sucuoğlu, 2015; Yumuşak & Balcı, 2018). Teachers with limited knowledge and skills in classroom and behavior management may encounter increased stress and a reduction in job satisfaction, which can have a negative effect on student learning (Stevenson et al., 2020), especially in inclusive classrooms. Accordingly, providing teachers with training in effective CM strategies should be a priority (Domitrovich et al., 2016; Pas et al., 2015). For the development of teacher training programs that meet their needs regarding effective inclusive classroom management, we believe that the current situation should be subjected to in-depth study to identify whether or not, and how they apply empirically supported strategies in their classrooms. Subsequently, it would be easier to make the necessary changes to pre-service and in-service training programs based on the findings of such a study. The purpose of the present study is to examine the CM strategies of inclusive teachers from the perspective of PCM and EBCM strategies, for which answers to the following questions will be sought:

- 1) What EBCM strategies do inclusive teachers use in their classrooms? Are there any significant differences in the frequency of the use of EBCM strategies by teachers for students with and without SN?
- 2) To what extent do elementary teachers use PCM strategies in their inclusive classrooms?
- 3) What do inclusive teachers think about their CM approaches?

4. Method

4.1 Study Group

Involved in the study were 14 primary school teachers with at least one student with SN in their classrooms. The demographic characteristics of the teachers and students with SN are presented in Tables 1 and 2.

Table 1 shows that all teachers attended at least one course on both inclusion and special education, while only five teachers in the group had taken part in in-service courses on CM, while the others had attended one CM course during pre-service or in-service training. In addition, all but one teacher had had a student with SN in their classroom in previous years. Given the limited number of special education teachers in elementary schools and the limited knowledge and skills of counseling teachers regarding inclusion, the participant teachers cannot be said to have been given systematic support in their teaching of inclusive classrooms.

All students with SN, aside from three, had a diagnosis of mild intellectual disability, and all had Individualized Education Plans (Table 2). Since there are no part-time inclusive elementary school programs in Turkey, such students attend regular classrooms full time. Under the Special Education Regulation of MoNE, SN students are provided with 2 hours of special education a week in private rehabilitation centers, free of charge. To compare the CM strategies used by the teachers for students with and without SN, each student with SN was matched with an AS based on their age and gender. The teachers reported that the AS included in the study had not been referred to any institution with any developmental or emotional problems.

4.2 Data Collection

A. Teacher Information Form

The *Teacher Information Form* was devised by the researcher to determine the demographic characteristics of the respondent teachers, such as their age, sex, educational background, professional experience, the characteristics of their SN students, and whether they had received pre-service or in-service training on inclusion and CM.

B. Evidence-Based Classroom Management Strategies Observation Form (EBCMOF)

The *Evidence-Based Classroom Management Strategies Observation Form (EBCMOF)* was developed to identify the participant teachers' EBCM strategies. For the development of the observation form, CM strategies (14 strategies) that are considered evidence-based were listed based in the light of related studies (Akalin & Sucuoğlu, 2015; Evertson & Emmer, 2013; Korspershoek et al., 2016; MacSuga & Simonsen, 2011; Oliver & Reschly, 2010; Oliver et al., 2011; Simonsen et al., 2008; Soodak & McCarthy, 2006; Wubbles, Brekelmans, den Brok & van Tartwijk, 2006; Wang et al., 1993). To collect accurate data on EBCM using the observation form, all of the listed strategies were defined as observable and measurable. A pilot study was planned and 35–40 minutes videos were recorded in the inclusive classrooms of three primary school teachers who were not in the study group. The observation form was filled by the researcher based on the videos, and it was revealed that the teachers used seven strategies in their CM, being: *Ensuring active participation, reinforcement, opportunities to respond, organizing transitions, providing prompts, redirection and pre-correction*, but never used such strategies as *using answer cards, making behavioral contracts, peer tutoring, time-outs, direct teaching, computer-assisted teaching and guidance notes*. Thus, the EBCMOF comprised seven strategies that can be observed in inclusive elementary classrooms. The observation form was then submitted to experts

in the CM field for their opinions, and the form was finalized after changes and corrections to the definitions of some strategies were made in line with the experts' suggestions.

The collected data referred to the frequency of use of each EBCM strategy (Alberto & Troutman, 2015), and the *total score* for each teacher obtained from the EBCMOT was calculated by adding the frequencies of each strategy used across three academic lessons. The researcher calculated the *intra-observer reliability values* for each strategy by watching the video recordings twice, 15 days apart, and reported *r* values ranging between .78–.98, with a mean of .89.

C. Proactive Classroom Management Observation Form (PCMOF)

The second group of data was collected using the PCMOF (Sucuoğlu, Akalın & Sazak-Pinar, 2007), which was developed for the evaluation of the proactive strategies used by teachers in academic lessons, examining thoroughly all aspects of the classroom management of teachers in the study group. The PCMOF allows researchers to identify which proactive strategies are used, and which are used correctly in inclusive classrooms. The form investigates four dimensions of the proactive strategy subscales, including classroom organization, teaching strategies, preventive strategies and dealing with problem behaviors. Of the 86 included items, 12 on the form related to the strategies used by teachers in the classroom for students with SN, such as adaptation instructions, materials and teaching methods, ensuring participation and monitoring engagement.

This form consists of two groups of items, with 74 positive items scored by the observer as one (1) or zero (0). For the 12 negative items, if the behavior is observed to be exhibited by the teacher or if the situation arises in the classroom, the observer gives zero (0) points, and gives one (1) point if the behavior is not observed. The form has a key sheet containing objective definitions of all items. The Cronbach's alpha value of the observation form is .80 (Sucuoğlu et al., 2007), which indicates that teachers' CM strategies can be reliably evaluated using the PCMOF. The highest possible score obtained from the form is 86; however, in the present study, each teacher's score was calculated based on the sum of the scores they received from the PCMOF in three academic courses, meaning that the highest obtainable score was 258. A researcher familiar with the class to be evaluated can complete the form in 15–20 minutes, making observations in any academic course. It is suggested that at least three academic courses be observed to collect more accurate data on PCM.

D. Classroom Management Strategies Self-Assessment Scale (CMSAS)

Using the Classroom Management Strategies Self-Assessment Scale (CMSAS) developed by Simonsen (2010), the teachers' CM strategies can be evaluated by themselves or by others. Teachers answer the 10 items on the scale by selecting yes (1) for strategies they think they use in the classroom, and no (0) for strategies they do not. The total score range obtainable from the scale is 0–10, with scores of 10–8 being *super*, 7–5 being *so-so* and less than five indicating *improvement needed*. To examine the psychometric properties of the Turkish form of the CMSAS, that scale was first translated into Turkish and then back-

translated. Both translations were then compared, and the items with different meanings in Turkish and English were reviewed once again before the scale was finalized.

To test the content validity of the score, the 10-item Turkish form was sent to four experts in CM and special education who were asked to evaluate each using a 4-point rating system in terms of understandability, language and relevance for the purpose of the study. The experts suggested creating new items since more than one strategy was involved in some of the items. For example, the third item of the scale, which is *"I have posted, taught, reviewed and reinforced 3–5 positively stated expectations (or rules) "*was divided into three items, namely a) *I identified 3–5 classroom rules that I expect my students to follow*, b) *I provide reinforcement to those who follow them, and reminded those who do not*, and c) *I identified a few rules to be followed on special occasions*. With the addition of the new items, the final version of the scale consisted of 13 items in total, with the highest achievable score being 13.

To determine the internal consistency of the CMSAS, the Cronbach's alpha coefficient was calculated based on data collected from 54 primary school teachers who were not involved in the study group, and was found to be .41. When the Cronbach's alpha coefficient is in the .41-.60 range, the scale is considered to have low reliability (Özdamar, 1999), and while the reliability of the scale is thus low, this can be explained by the fact that the teachers' responses to the scale items were almost the same, in that all of the teachers answered *yes* to the items, and almost all of them got close to the highest possible score. It is thought that the homogeneity of the responses contributed to reducing the reliability coefficient of the scale (Crocker & Algine, 1986).

4.3 Data Collection

The study data were collected from inclusive classrooms in five public primary schools in Ankara. As a first step, permission for the study was obtained from the Ministry of National Education (MoNE), and the school principals were informed about the purpose of the study. In each school, classrooms containing a student with SN were identified, and individual meetings were held with the teachers of these classrooms under the guidance of the school principles to inform them about the purpose and methodology of the study. Next, each teacher, all of whom took part in the study voluntarily, was interviewed and an appropriate date and time for videoing their classrooms were agreed. To prevent a loss of data during observation, video recordings were made of a total of 42 lessons in three academic classes (Turkish Language, Math, Life Sciences) in each classroom. The first researcher filled out the observation forms after watching the videos. Each video was watched twice, once for the collection of data using EBCMOF and once for PCMOF. The researchers also evaluated the frequency of use of each EBCM strategy for students with and without SN separately. Finally, the teachers were requested to fill out the CMSAS for the evaluation of their CM strategies.

4.4 Data Analysis

Using the EBCMOF, the frequencies of use of the most- and least used evidence-based strategies by teachers in three academic lessons were calculated separately for AS and students with SN, along with the standard deviations and minimum and maximum scores. b) A Mann-Whitney U-Test was used to identify the presence of significant differences between the frequency of use of EBCM strategies for students with SN and AS. c) To evaluate the PCM strategies used by the teachers, the total scores, subscale scores, standard deviations, minimum and maximum scores, and mean scores obtained by teachers from the PCMOF were calculated. d) Finally, the same calculations were made for the scores obtained from the self-assessment tool. The data collected in the study were analyzed using IBM SPSS Statistics (Version 20.0. Armonk, NY: IBM Corp).

5. Results

5.1 Evidence-Based Classroom Management Strategies of the Inclusive Classroom Teachers

Based on the frequency of use of each strategy, the EBCM strategies that teachers used the least and most for students with and without SN were identified, and the results are presented in Table 3. Descriptive analysis indicated that the strategies that the teachers used the most for AS in three academic courses were *ensuring active participation* ($f=25$), *reinforcement* ($f=9$), *using prompts* ($f=1$) and *re-directing* ($f=2$), while a *pre-correction* strategy was never used. The strategies used by the study group for students with SN were *ensuring active participation* ($f=84$), *reinforcement* ($f=17$), *providing opportunities to respond* ($f=14$) and *re-directing* ($f=13$). The least used strategies for this group were *pre-correction* ($f=1$), *use of prompts* ($f=2$) and *organizing transitions* ($f=4$), while two teachers were found not to use any strategies for students with SN. Table 3 presents the frequencies of the EBCM strategies used by teachers for the AS and SN students.

To determine whether there a significant difference existed between the frequencies of use of EBCM strategies by teachers for SN and AS, the mean of the total scores obtained from the EBCMOF for the two groups of children were compared with a Mann-Whitney U-test. The result revealed no significant difference between the mean frequencies of the strategies used for SN and AS ($U=54.000$, median=3, $p>.05$), suggesting that classroom teachers generally use the same strategies for the two groups of students.

5.2 Proactive Classroom Management Strategies of Inclusive Classroom Teachers

The analysis of the data collected by the PCMOF showed that teachers received the highest scores on *procedures and organizations*, *attracting and retaining students' attention* and *giving directions*, while their scores in *rewarding positive behavior*, *initiating the lesson* and *organizing transitions* were only half what was expected. The teachers scored the lowest in the items related to *materials*, *identifying and teaching classroom rules*, *individualization of instructions*, *prompts*, *dealing with problem behaviors*, *concluding the lesson* and *monitoring students*. Although the highest possible score that could be obtained from

three academic lessons was 258, the mean score obtained by the teachers was 122.6. Descriptive statistics of the data obtained using the PCMOF are presented in Table 4 below.

Although the participating teachers scored quite high in some subscales of PCMOF, some of the strategies included in these subscales were not used at all. For example, considering the “*Attracting and maintaining the attention of students*” subscale, the teachers made no effort to attract students with SN. Similarly, for the *initiating the lesson* and *rewarding positive behaviors* subscales, it was observed that there were teachers who began the class or activity without *attracting the attention of all students*, including those with SN. The teachers mostly *rewarded* students for their academic behaviors, but this was not the case for social behaviors. Additionally, the teachers scored very low in the *concluding lesson* subscale of the PCMOF. Moreover, an analysis showed that the participants attempted to *control problem behaviors* by using reactive strategies such as *reprimanding and punishing*, while some teachers *did not notice the problem behavior(s)* exhibited by students with SN. The mean scores of the teachers were also low for the *classroom rules* item, such as *praising students who follow the rules*. When it came to the *individualization of instruction*, the teachers *did not provide peer support to the students with SN* and did not make the necessary *changes and adaptations* in line with the needs of SN students. Of the total, three teachers worked with the SN student individually, albeit for a short time. It was observed that half of the teachers (n=7) *did not monitor what the student with SN* did during the lesson, or whether they participated in-class activities.

5.3 Self-Evaluations of Teachers

For the final stage of the study, an examination was made of the teachers’ own evaluations of their CM. According to the results, the teachers' average score from the CMSAS was 12.5, the standard deviation was 1.1 and the range was 10–13. Given that the highest score that can be obtained from the scale is 13, it would seem that teachers rate their CM approach as very good. Very few of the teachers stated that they did not use the strategies specified in some items; for example, only two teachers said that they did not *identify the classroom rules*, while another stated that she did not *highlight positive behaviors*.

6. Discussion and Conclusion

The purpose of this study was to identify the EBCM and PCM strategies used by inclusive teachers, and their evaluations of their CM. The study's first finding relates to which EBCM strategies teachers use in their classrooms, how often, and whether the strategies used for SN and AS differed. According to the results of analysis, the teachers tried to facilitate learning and prevent problem behaviors among SNs and AS through *active participation*, *praising* and *providing opportunities to respond* the most. Previous literature shows that the *active participation* of students in activities reduces the possibility of problem behaviors, such as talking about irrelevant topics or getting up (Greenwood, Terry, Marquis & Walker, 1994), while providing *opportunities to respond* in class increased

task-related behaviors (Carnine, 1976; Sutherland, Alder & Gunter, 2003). In addition, praising students for correct responses (Sutherland et al., 2003) served to improve success and alleviate the problem behaviors (Carnine, 1976; Sutherland et al., 2003; West & Sloane, 1986). Another strategy often used by the study group, *reinforcing positive behaviors*, leads to desirable outcomes in academic performance, appropriate classroom behavior and peer acceptance (Nevin, Johnson & Johnson, 1982), and also problem behaviors (Rasmussen & O'Neill, 2006; Reinke et al., 2008). Therefore, the use of these strategies in the classrooms is considered to be important for all outcomes related to children with and without SN. However, the teachers were found to use such strategies as *providing an opportunity to respond*, *reinforcement* and *ensuring active participation* in the classroom, they had difficulties in using them correctly, and the implementations did not match the definitions of the strategies on the form. For example, some teachers provided SN students with an *opportunity to respond* that did not match their developmental characteristics, and when students did not respond or responded incorrectly, the teachers were unable to give appropriate prompts to reveal the correct responses, or to provide any *feedback* on the responses of the students. Failure to implement EBCM strategies with high fidelity can prevent the expected results from the strategy form being achieved (Dart, Cook, Collins, Gresham & Chennier, 2012; Noell, Gresham & Gansle, 2002), and this may lead teachers to believe that such strategies do not work. Accordingly, teachers lacking the necessary knowledge and skills for the successful implementation of EBCM strategies need support in the use of such strategies. In addition, when appropriate support is provided, such as coaching and feedback, it is more likely that the academic performance and problem behaviors of the students with and without SN would be changed for the better in inclusive classrooms (Fallon, Collier-Meek & Kurtz, 2019).

The EBCM strategies that the teachers used the least for both student groups were *prompting* and *organizing transitions*. In addition, while *redirection* strategies were used very frequently in the three courses, the *pre-correction* – which can be effective in preventing problem behaviors – was used very little by the participant teachers. Previous studies have shown the effectiveness of the strategies of *organizing transitions* (McIntosh, Herman, Sanford, McGraw & Florence, 2004), *pre-correction* (Ennis, Schwab & Jolivette, 2012; Lewis & Bullock, 2004), and *prompting* (Alberto & Troutman, 2015) on the positive and negative behaviors of students with and without SN. Accordingly, the lack or infrequent use of these strategies in classrooms suggests that the teachers are unfamiliar with them and the positive impact they can have on the learning and behavior of students.

Our findings show that the frequencies of the strategies used for students with and without SN are not significantly different. Although the finding is not consistent with literature emphasizing the principles of inclusion, in which it is stressed that teachers need to make changes to their behavior management, teaching methods and organization of classroom approaches to match the needs of students with SN if they are to benefit from inclusion (Friend & Bursuck, 2002). According to the studies, teachers who do not use the same strategies for every student in their classrooms and who adapt/change the

strategies and methods they use based on the characteristics of each student achieve better student outcomes (Blanton, Blanton & Cross, 1993; King-Sears, 2005, 2007, 2008; Stecker & Fusch, 2000). Teachers should thus be aware of the individual characteristics and needs of the students in their classrooms, and adopt appropriate strategies for effective CM.

According to the data collected by the PCMOF examining all dimensions of proactive CM, our teachers vary in their use of the defined strategies, but scored high only in three of the subscales on the observation form. *Procedures and organization* were the subscale in which the teachers gained one of the highest scores, covering the structure and layout of the classroom, such as keeping busy areas empty, ensuring the teacher has access to each student easily during instruction and the seating arrangement. Considering the effects of well-organized classrooms on the problem behaviors and engagement (Guardino & Fullerton, 2010) of students, it would seem that the participant teachers were able to organize their classrooms to minimize distraction, even though the structure, furniture and materials in the classrooms were not entirely dependent on the teachers themselves.

The *giving directions* subscale evaluates whether inclusive teachers provide clear and understandable directions that can be clearly understood by all students, allowing them to complete the given task (Sucuoğlu et al., 2010). The study group gained one of the highest scores in this subscale. On the other hand, *attracting and maintaining the students' attention*, which includes items related to the teacher's ability to attract the students' attention to the subject, materials or task through the use of attention getters, was the third subscale in which the teachers excelled. These strategies help students become engaged in the academic and behavioral tasks that the teachers are expected to accomplish, and they are highly associated with effective CM (Kounin, 1970). *Gaining and maintaining the attention* of students is accepted as being related to the distractions, interests and learning preferences of students (Gerschler, 2012). Our findings related to these strategies may indicate that the participant teachers were successful in the use of various verbal, gestural and behavioral strategies to gain and maintain the students' attention, as they were able to control such distractions as in-class and external noise levels, taking into account the students' interests, understanding and learning style. That said, as will be explained in a later paragraph, this was not the case for the students with SN. The majority of the teachers made no effort to attract the attention of the SN students, and they did not ensure these students understood the direction and were able to complete the task at hand.

Rewarding positive behavior is critical for the prevention of problem behaviors and for the teaching of appropriate behaviors to all students (Simonsen et al., 2008; Simonsen et al., 2017). In the present study, although the EBCMOF data showed that the participants used *reinforcement* to promote positive behaviors in all students, the PCMOF provided additional information on this issue. For example, although half of the teachers made use of praise and reinforcement in different forms in their classrooms, they only reinforced academic behaviors, and did not praise the social behaviors of both the

students with and without SN, such as sharing, hand-raising and asking for help. It is well known that students with SN often experience social problems (Hallahan & Kaufman, 2006), peer rejection (Guralnick, 1999) and challenges in the use of social skills (Kavale & Forness, 1996; Çifci-Tekinarslan & Küçüker, 2015) in inclusive classrooms. Therefore, supporting the social skills of students with SN is accepted as one of the goals of inclusion (Frederickson & Turner, 2003). Accordingly, reinforcing the social skills of students with SN and their typically developing peers is recommended as an important and proactive strategy for increasing on-task behaviors, student attention and compliance in inclusive classrooms (Simonsen et al., 2008; Simonsen et al., 2017).

It was revealed in the study that the participant teachers used very few preventive strategies, such as planning transitions and individualizing instructions, monitoring the work of students, and beginning and concluding the lessons. They also failed to use them with fidelity, as defined in the PCMOF. For example, identifying, posting, teaching and reminding of the *classroom rules* are at the heart of effective classroom management (Emmer & Stough, 2001; Evertson & Emmer, 2013; Marzano et al., 2003), and were the items in which the teachers scored the lowest. Moreover, some teachers did not *prepare materials* in advance or used materials that were inappropriate for the subject they were covering. The teachers were also found to be less likely to use proactive strategies for *transitions* between activities, and not to plan for smooth transitions, even though planning transitions between activities might prevent many problematic behaviors (Ergin & Bakkaloğlu, 2019; Iadorala et al., 2018; Hume, Sreckovic, Snyder, & Carnahan, 2014). Furthermore, the participants mostly tried to *control problem behaviors* through the use of reactive strategies, such as negative feedback, reprimands and punishment, rather than proactive strategies, despite the fact that previous studies presenting evidence of the link between problem behaviors and the engagement with students in classrooms, and the poor CM skills of the teachers (Gage et al., 2018; Oliver et al., 2011).

As for the findings regarding the students with SN, the teachers had difficulties providing *individualizing teaching* based on the needs of the students with SN, and tend to make only small accommodations/modifications to their instruction, despite having undergone pre-service or in-service training in inclusion and CM. Additionally, most of the participants were unable to increase the engagement of students with SN in academic activities or use the necessary *prompts*, being specific cues that provide students information about their behaviors and tasks (Simonsen, Myers & DeLuca, 2010) so as to increase their learning and engagement. The participants generally did not pay individual attention to students with SN, did not *monitor their work*, and did not *offer necessary feedback* related to the subject. It should be emphasized here that the findings related to students with SN should not be considered surprising, as previous studies have shown that preschool and elementary school teachers repeatedly report problems in teaching and managing heterogeneous classrooms that contain students with different ability levels (Akalın & Sucuoğlu, 2015; Sucuoğlu, Bakkaloğlu, Akalın, Demir & İşcen-Karasu, 2015; Varlier & Vuran, 2006).

The limited use of proactive and evidence-based strategies can be associated with the fact that the training in CM (Akalin, 2007; Güner, 2010) and inclusive education (Sucuoglu et al., 2015) received in the universities is lacking, and teachers also have limited access to support services. Furthermore, short-term in-service training programs involve mostly the transfer of knowledge to teachers, and teachers have reported being unable to use and adopt the new strategies they have learned in their inclusive classrooms (Akalin et al., 2014). Our findings regarding the limitations of inclusive teachers in the use of proactive and evidence-based CM skills lead us to consider the development of pre-service and in-service teacher training programs on inclusive classroom management in which the focus is on strategies that are strongly related to student learning and problem behaviors.

The last finding of the study is related to the self-evaluation of the teachers, which is consistent with the results of several previous studies. In an early study of CM by Kounin (1970), significant differences were reported between the CM-related behaviors of teachers that they mentioned themselves during interviews, and their actual behaviors, identified during class observations, and therefore, the real situation in the classroom cannot be reflected by the interview findings. Similarly, Çifci et al., (2001) assessed the reinforcement and praise used by teachers in their special education classrooms through observations and interviews, and determined that the two groups of data did not overlap. Similar findings were obtained in the current study, the scores received from CMSAS indicate that all teachers rate their CM strategies as *super*, while classroom observations show that teachers did not use the strategies they claimed to be using in their classrooms. For example, all of the teachers said "yes" to the item in the CMSAS that read, "*Rather than those that are inappropriate, I highlight the appropriate behaviors of my students and consolidate these behaviors.*" The classroom observations, however, revealed that teachers often tried to control inappropriate behaviors through the use of reactive practices. Similarly, all teachers said "yes" to another item that read, "*I offer every student numerous opportunities to respond, react and participate in activities.*" However, it was noted during the observations that seven teachers never provided any learning opportunities to students, especially those with SN. These findings suggest that the teachers are either unable to realistically evaluate their classroom management, or are influenced by *social desirability* when responding to scale items. It has long been known that the responses of individuals to questions about themselves are influenced by factors other than the content of the question, among which, the most compelling is the tendency of individuals to project themselves as being liked or having desirable characteristics. This tendency, called the *social desirability effect*, leads to serious measurement errors that threaten the validity of data obtained using the self-reporting method (Akin, 2010; Fisher & Tellis, 1998; Luke & Grosche, 2018). Taking into account social desirability effects, it is safe to say that more accurate and valid information can be obtained by observing the CM of teachers in classrooms at all levels using objective tools in future studies.

To conclude, we believed that this study offers a realistic overview of the management of inclusive classrooms, as the data was obtained through observations in

the classrooms and based on information provided by teachers. Although there have been studies in our country investigating the CM of preschool and elementary classroom teachers, they have failed to show which, and how, specific strategies are used in inclusive classrooms, and which strategies the teachers need to learn. It can thus be accepted that this study contributes to previous literature by focusing on the implementation of specific strategies by inclusive elementary teachers. Additionally, the fact that the concept of EBCM, which has not been covered in previous CM researches and practice in Turkey, was used for the first time in this study suggests that the study may contribute to national literature. On the other hand, the current study has also revealed that as the teachers use random strategies and do not implement them with fidelity, the use of empirically proven CM strategies with low fidelity can be accepted as a barrier to effective CM. This leads us to think that teachers may start to believe that CM strategies are not helpful when working in heterogeneous classrooms. Moreover, according to our findings, even the teachers who gained high scores in some subscales faced challenges in the application of strategies to SN students. It is apparent that effective teachers are effective with all students, and with all achievement levels, regardless of the heterogeneity of their classes (Marzano, 2003), and improvements in the management of inclusive classrooms may be possible by informing teachers about both CM and inclusion, and supporting them in real-life situations. Furthermore, the current study's findings have revealed the importance of focusing on empirically proven CM practices when determining the content of pre-service and in-service teacher training. As a final word, developing a guide for elementary teachers that offers information and examples on effective CM strategies, that explain how to implement them in accordance with the characteristics of students will alleviate the challenges associated with CM and increase the effectiveness of CM practices.

6.1 Limitations and Recommendations

Although this study can be considered important in revealing what is happening in terms of CM in inclusive classrooms, it is necessary to mention a few limitations. *First*, the data of the study were collected from schools located in a region that could be accessed, and where video recording of the classrooms was possible. Future studies could collect information from different types and levels of schools in different areas through observations and interviews. *Second*, the study did not examine the relationship between the CM strategies used by teachers and the behavioral and academic outcomes of the students, as this fell outside the scope of the study. *Third*, the data were collected only from academic lessons. Analyzing the CM strategies of teachers in other courses, such as music, art, PE, etc., would offer a broader perspective of CM in inclusive classrooms. As a final suggestion, examining the theoretical and practical aspects of pre-service CM courses in future studies would provide a basis for the planning of in-service CM courses and the provision of support to teachers on matters of inclusion and CM.

Conflict of Interest Statement

The authors declare no conflicts of interest.

About the Authors

Ayfer Aslan, PhD Student, Gazi University, Department of Special Education, Turkey. Master's: Ankara University Department of Special Education, Turkey. Undergraduate education: Ankara University Educational Sciences Department of Classroom Teaching. Research Interests: Classroom management, teacher education, inclusive education, universal design for learning. orcid.org/0000-0002-8837-8598

Prof. Dr. Bülbin Sucuoğlu, Hacettepe University, Pre-School Education, Turkey. PhD: Hacettepe University, Child Development and Education, Turkey. Master's: Hacettepe University, Child Development and Education, Turkey. Undergraduate Education: Hacettepe University, Child Development and Education, Turkey. Research Interests: Early Childhood Special Education, Preschool Inclusion, Classroom Management. orcid.org/0000-0002-8733-9765

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Appendix

Table 1: Characteristics of Participant Teachers

		N	%
Age	26–30	6	42.8
	31–35	3	21.4
	41–45	1	7.1
	46 and over	4	28.6
Professional experience	1–5 years	1	7.1
	6–10 years	8	57.1
	20 years or more	5	35.7
Education	Department of Elementary Teacher Education (4-year program)	13	92.8
	Other Departments of the Faculty of Education	1	7.1
Experience in inclusion	Yes	13	92.8
	No	1	7.1
Training in inclusive classroom	One in-service training	3	21.4
	One pre-service course	7	50
	None	4	28.6
Training in classroom management	One In-service course	6	42.8
	One pre-service course	3	21.4
	None	5	35.7

Table 2: Characteristics of the students with SN in the Study Group

Students with SN	Grade	Age	Gender*	Diagnosis
1	First Grade	6	F	Intellectual disability
2	First Grade	6	M	Developmental disability
3	Second Grade	7	M	Dyslexia
4	Second Grade	7	M	Intellectual disability
5	Second Grade	7	M	Intellectual disability
6	Second Grade	8	M	Intellectual disability
7	Second Grade	7	M	Autism
8	Second Grade	8	M	Intellectual disability
9	Third Grade	8	M	Intellectual disability
10	Third Grade	9	M	Intellectual disability
11	Third Grade	9	M	Intellectual disability
12	Third Grade	9	M	Intellectual disability
13	Third Grade	8	M	Intellectual disability
14	Third Grade	8	F	Intellectual disability

Table 3: The frequencies of EBCM Strategies Used by Teachers for SN Students and AS

Teachers	The Frequencies of Strategies													
	OTR		R		P		RD		PC		AP		T	
	SN	AS	SN	AS	SN	AS	SN	AS	SN	AS	SN	AS	SN	AS
1.	1	0	1	0	0	0	0	0	0	0	4	1	0	0
2.	0	0	1	2	0	0	0	1	0	0	7	3	2	0
3.	0	0	0	0	0	0	0	0	0	0	0	1	0	0
4.	3	1	3	2	0	0	6	0	0	0	4	2	0	0
5.	0	0	0	0	0	0	0	1	0	0	5	4	1	1
6.	4	2	5	2	0	0	0	0	1	0	22	2	0	0
7.	1	0	1	1	1	1	0	0	0	0	14	1	0	0
8.	0	0	1	0	0	0	0	0	0	0	0	1	0	0
9.	0	0	0	0	0	0	0	0	0	0	0	2	0	0
10.	3	1	3	1	0	0	3	0	0	0	14	1	0	0
11.	0	0	0	0	0	0	1	0	0	0	3	2	0	0
12.	0	0	0	0	0	0	1	0	0	0	1	2	0	0
13.	1	0	1	0	0	0	2	0	0	0	7	2	0	0
14.	1	0	1	1	1	0	0	0	0	0	3	1	1	0
Total	14	4	17	9	2	1	13	2	1	0	84	25	4	1
Mean	1	0.3	1.3	0.6	0.1	0.1	1	0.1	0.1	0	6	2	0.3	0.1
SD	1.4	0.6	1.4	0.8	0.3	0.9	2.2	0.4	1.3	0	6.3	1.2	1.4	0.9
Range	0-4	0-2	0-5	0-2	0-1	0-1	0-6	0-1	0-1	0	0-22	1-4	0-2	0-1

*OTR: Opportunity to respond, R: Reinforcement, P: Prompts, RD: Re-Direction, PC: Pre-Correction, AP: Active Participation, T: Transitions

Table 4: Descriptive Statistics of the Total and Subscale Scores Obtained by Teachers from PCMOF

PCMOF Strategy Dimensions	PCMOF Subscales	Maximum Score	Mean	SD*	Range
Classroom organization	Posting classroom rules	18	1	2.7	0-9
	Teaching and monitoring rules	18	4.2	6.2	0-16
	Procedures and organizations	18	16.7	1.6	14-18
Teaching	Initiating the lesson	21	12	2.02	8-15
	Course materials	21	0	0	0
	Individualization of instruction	18	4.07	4.15	0-12
	Giving directions	12	9.71	0.91	9-12
	Attracting and maintaining the students' attention	12	10.14	1.09	9-12
	Concluding the lesson	24	7.7	1.5	5-10
	Monitoring student participation	15	9.5	3	4-15
Preventive strategies	Transitions	24	11.79	4	7-21
	Rewarding (reinforcement)	24	12.5	3.04	6-16
	Prompts	12	5.9	1.9	1-9
Problem behaviors	Positive and negative reactions	21	7.3	1.2	5-9
	Total score	258	122.6	14.9	155-97

*SD: Standard deviation

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