



## INVESTIGATING THE RELATIONSHIP BETWEEN TEACHERS' SELF-EFFICACY BELIEFS AND EFFICACY FOR INCLUSION

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### **Abstract:**

The aim of this study is to investigate the relationship between teachers' self-efficacy beliefs and efficacy for inclusion education. Study participants included a total of 1204 teachers taken from preschool, classroom, subject-matter and special-education departments from schools in four different geographical regions of Turkey. Data were collected using the Teachers Sense of Efficacy (TSE) Scale and the Teacher Efficacy for Inclusion Practices (TEI) Scale. The results revealed a significant relationship between the teachers' self-efficacy beliefs and efficacy for inclusion. The levels of self-efficacy and efficacy regarding the inclusion of the teachers were higher for female teachers, experienced teachers, teachers who had taken previous courses about special education, and the teachers who have previously interacted with an individual with special needs. In addition, the efficacy level of novice teachers regarding inclusion was found to be higher than that of more experienced teachers.

**Keywords:** inclusive education, self-efficacy belief, inclusion efficacy

### **1. Introduction**

At the current time, the process and policy of inclusion are considered to be something of a reform act, one that aims to include all students into the educational system regardless of their individual differences or social backgrounds. It is accepted as a

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preferred method regarding the placement of students with special needs (UNESCO, 2009). The inclusion act aims to improve school systems, not only for individuals with special needs, but also for the general population (Ainscow, 2005).

Inclusion practices have existed for a long time in developed Western countries; nevertheless, researchers and parents in Turkey have only started focusing on inclusionary practices in education in the last 25 years. In Turkey, Special Education Regulation 573 and the special education services regulation came into effect in 1997 and 2006, respectively with the aim of encouraging inclusive education as well as in many other countries. Consequently, inclusive education practices have accelerated in Turkey as a result (The Ministry of National Education (MoNE), 1997, 2006). Over the last 30 years, there has been changing global perspective regarding the terminology of such education, and the term 'integration' has largely been replaced by the term 'inclusive' for such educational policies and processes (Avramidis & Norwich, 2002). In Turkey and among Turkish researchers, the term 'mainstreaming' has been used in place of 'inclusion'.

Despite the aforementioned legal regulations and policies, inclusion in Turkey has not been widely accepted, nor has it yielded the expected benefits. The reason for this case might stem from the fact that successful inclusive education depends on numerous factors. Among these, teachers are the most important, and have been shown as one of the most basic factors regarding the inclusion of students with special needs (Paneque & Barbetta, 2006; Sharma, Loreman, & Forlin, 2012).

Providing an appropriate and effective education for students with special needs within inclusive environments is dependent on many factors. Teachers' self-efficacy beliefs are among the most important factors determining the success of an inclusive practice (Jordan, Schwartz, & McGhie-Richmond, 2009; Paneque & Barbetta, 2006; Sharma, et al., 2012). Self-efficacy belief is an important phenomenon in social learning theory; it can be defined as one's belief in their capacity to organize those activities and actions necessary to display a particular performance and to do so successfully (Bandura, 1984). According to Bandura (1997), one's self-perception of efficacy has an important role to play regarding their preferences; self-efficacy beliefs direct an individual's behavior.

Teacher self-efficacy, on the other hand, is defined as "teachers' self-confidence or thought regarding the provision of an effective education for their students" (Guskey & Passaro, 1994). Tschannen-Moran and Woolfolk Hoy (2001) provide a different definition, and assert that teacher self-efficacy is a teacher's belief regarding their capability to perform effectively within the teaching profession. Therefore, teachers' perceptions of their capabilities are assumed to be one of the important factors affecting

teaching practices. Teachers' self-efficacy beliefs affect their teaching quality, teaching methods and techniques used, students' participation in learning, and students' comprehension of teaching, all of which determine students' success. Well-educated preservice teachers are expected to promote self-efficacy before anything else, while teachers with a low and high self-efficacy are different in terms of their classroom management skills, utilization of different methods, and provision of feedback for students with learning difficulties; these differences have been reported as impacting students' motivation and achievement (Yılmaz, Köseoğlu, Gerçek, & Soran, 2004). Those teachers who believe that effective teaching can influence learning, and who are confident in their teaching abilities can persevere for longer and provide different types of feedback for their students. Some researchers have suggested that a positive relationship exists between a teachers' confidence in their teaching abilities—or their positive perceptions/beliefs regarding their capabilities—and their students' achievement levels, motivation, and efficacy. Furthermore, it has been suggested that self-efficacy belief is one of the most important predictors of teacher efficacy (Güvenç, 2011; Palmer, 2006; Tekkaya, Çakıroğlu, & Özkan, 2002; Yılmaz et al., 2004).

According to the available literature, a strong relationship exists between teachers' self-efficacy perceptions and students' academic achievement (Woolfolk, 2007). Teachers' with a high self-efficacy perceptions employ different types of behavior-management skills, perform more practical activities, and use more effective teaching methods (Jordan, Glenn, & McGhie-Richmond, 2010; Tschannen-Moran & Woolfolk-Hoy, 2001). Other studies on teachers' self-efficacy perceptions revealed that teachers with a high full self-confidence or self-efficacy perception are more eager to meet students' needs and seek out new approaches and methods (Stein & Wang, 1988); use more effective classroom management skills (Emmer & Hickman, 1991); allocate more time for problematic students (Gibson & Dembo, 1984); prefer not to direct such students to special education centers (Sodak & Podell, 1993a); and attempt to spend more time with students with learning difficulties (Gibson & Dembo, 1984).

Teachers' self-efficacy belief has a significant influence on their success in performing inclusion practices (Paneque & Barbetta, 2006; Sharma, et al., 2012). Successful teaching in an inclusive classroom is dependent on teachers' beliefs regarding the responsibilities and needs of students with special needs (Jordan, et al., 2009). Other studies have reported findings suggesting that teachers with a higher level of self-efficacy belief used more effective teaching strategies and were more insistent in educating those students with lower levels of interest towards academic activities. Contrary to this situation, teachers with a lower level of self-efficacy have been reported as spending more time on non-academic works and inhibiting students' learning by

using ineffective teaching methods (Savolainen, Engelbrecht, Nel, & Malinen, 2011; Sharma, et al., 2012).

Previous research on the self-efficacy of general-education teachers in inclusive classrooms revealed that these individuals' self-efficacy was related to them being more open toward inclusion (Meijer & Foster, 1988; Soodak & Podell, 1993a; Soodak & Podell, 1993b; Soodak, Podell & Lehman, 1998). Additionally, teachers' high self-efficacy belief towards inclusion has been reported holding a relationship to more positive attitudes regarding inclusion (Weisel & Dror, 2006), being more sensitive towards students with special needs (Soodak, Podell, & Lehman 1998), their perceived success regarding the effective teaching of students with special needs in the general education classrooms (Brownell & Pajares, 1999), and their pupils being able to deal with their own problems more effectively (Almong & Shechtman, 2007). Similarly, researchers found out that training on the education of students with special needs within integration classrooms significantly increased teachers' efficacy towards inclusion (Chao, Forlin, & Ho, 2016; Forlin & Chambers, 2011; Oswald & Swart, 2011; Sharma, Shaukat, & Furlonger, 2015).

In Turkey, many studies on teacher efficacy have been conducted and the results of these studies have mainly focused on general and science education (Ekici, 2006; Çakiroglu, Çapa, & Sarikaya, 2004; Savran, Çakiroglu, & Çakiroglu, 2004; Yılmaz et al., 2004). Conversely, studies regarding the determination of self-efficacy beliefs of teachers in the special education field in Turkey remain limited. When the results of such studies are investigated, special education teachers are seen to perceive themselves as more efficient in working with children with mental disabilities when compared to general-education teachers (Diken & Özokçu, 2004). Pre-service teachers have also been found to have generally positive views towards the inclusion of children with intellectual disabilities (Diken, 2006), while a significant relationship has been found to exist between pre-service teachers' perception of self-efficacy beliefs and inclusive education efficacy (Dolapçı & Yıldız Demirtaş, 2016); a significant relationship between the self-efficacy of classroom teachers and their efficacy towards inclusive education has also been reported (Toy & Duru, 2016).

Teachers' self-efficacy beliefs are considered to be an important factor influencing teaching practices in inclusive education, as well as an important factor influencing positive teacher attitudes towards students with special needs. Additionally, teachers' self-confidence sentiments of teachers regarding self-efficacy perceptions and their working with students with special needs directly affect inclusion education success. This highlights the importance of determining the inclusion education teachers' general self-efficacy and their integration self-efficacy. Therefore, the purpose of this study is to determine the relationship, if any, between the teachers' general self-efficacy beliefs and

their efficacy towards inclusive education, as well as to investigate whether or not their self-efficiency and integration efficiency levels show significant differences in terms of certain demographic variables. This study aims to answer the following research questions:

1. Is there a significant relationship between teachers' self-efficacy beliefs and their efficacy regarding inclusion?
2. Do teachers' general-efficacy beliefs and their level of efficacy regarding inclusive education vary according to certain variables such as gender, occupational experience, the statuses of interacting with individuals with special needs, and taking courses about special education?

## **2. Method**

### **2.1. Model of the Study**

This study was designed as a relational survey study to investigate the relationship between teachers' self-efficacy and their efficacy regarding inclusive education (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2009).

### **2.2. Participants**

The surveys used in this study were mailed to a total of 2000 teachers from five different cities (Malatya, Ankara, Bolu, İzmir, & Eskişehir) located in four geographical regions of Turkey. Surveys were distributed during the 2016–2017 academic year and participating schools selected at random. Of the 2000 teachers who received the survey package, 1242 teachers completed and returned them via their principals. The response rate was determined 62%, and 38 scales were excluded due to incomplete answers; thus, a total of 1204 scales were analyzed. Of the participants, 28% were preschool teachers, 39% were classroom teachers, 25% were subject-matter teachers, and 9% were special-education teachers. The gender distribution of the participants is as follows: 62% were females and 38% were males.

### **2.3. Data Collection Tools**

**Demographic Information Form:** The Demographic Information Form was developed by the researchers of this study to collect data on the demographical characteristics of the study's participants. Questions on teachers' gender, occupational experience, subject matter, status in communicating with individuals with special needs, and taking courses about special education were included in the form.

Teachers' Sense of Efficacy (TSE) Scale: TSE was developed by Tschannen-Moran and Woolfolk Hoy (2001) and adapted into Turkish by Çapa, Çakiroğlu, and Sarikaya (2005). The Scale was used to determine teachers' self-efficacy beliefs. The scale consists of 24 five-point Likert-type items ranging from 'insufficient' (1 point) to 'quite sufficient' (5 points). The Scale also contains three sub-dimension: "Providing students' participation", "Classroom management", and "Teaching strategies". A high score indicates a high self-efficacy belief while a low score indicates a low self-efficacy belief. A reliability test of the scale was conducted by Çapa et al. (2005) with a total of 628 Turkish preservice teachers—the coefficients of internal consistency were found to be .82, .84, and .86 respectively for the sub-dimensions, and .93 for the scale overall.

Teacher Efficacy for Inclusion (TEI) Scale: TEI was developed by Hollender (2011) to determine teachers' efficacy for inclusive-education practices. A reliability test of the Turkish form of the scale was conducted by Meral and Bilgiç (2012) using a total of 343 Turkish teachers. According to the confirmatory factor analysis results, the  $\chi^2/sd$  ratio ( $\chi^2=995.19$ ,  $sd=245$ ,  $995.19/245=4.06$ ,  $p=.00$ ,  $N=343$ ) was found to be within the acceptable range. The fit indices were found to be  $RMSEA=.09$ ,  $SRMR=.05$ ,  $NFI=.96$ ,  $NNFI=.97$ , and  $CFI=.97$ , indicating that the model had an acceptable goodness of fit. The model's factors loadings were found to range between .59 and .81, and all factor loadings were determined as higher than .40. Within the scope of the reliability test of the model, the Cronbach Alpha ( $\alpha$ ) internal consistency coefficient, split-half reliability, item-total correlation, and the significance of the relationship between the average scores of the upper and lower 27% from both extremes were investigated. The internal consistency of the Teacher Efficacy for Inclusion Scale was found to be  $\alpha=.96$ .

#### **2.4. Data Analysis**

SPSS software was used to analyze the data. The tests of the arithmetic mean and standard deviation among the descriptive statistics were used to measure the levels of teachers' self-efficacy beliefs and their efficacies regarding inclusion. In addition, the Pearson Product-Moment Correlation and Multiple Linear Regression tests were used to determine whether the relationship between teachers' self-efficacy beliefs and their efficacy is significant (Büyüköztürk, 2005).

### **3. Results**

This section shall present the frequencies, arithmetic mean, standard deviation, minimum and maximum scores, and correlation-analysis results of teachers' self-efficacy and their efficacy regarding inclusion.

A. The correlation between the teachers' self-efficacy and their efficacy for inclusive practices

**Table 1:** Correlation analysis results

	1	2	3	4
1. Providing students' participation	1			
2. Teaching Strategies	.82	1		
3. Classroom Management	.82	.83	1	
4. Self-efficacy in total	.94	.95	.95	1
5. Inclusion efficacy in total	.50	.51	.51	.53

\*  $p < .05$

As seen in Table 1, a positive and mid-level relationship was found between teachers' general self-efficacies and their efficacy for inclusive practices ( $r=.539$ ); as teachers' general self-efficacy increases, their efficacy for inclusive practices also increases. Significant relationships were also found between the teachers' efficacy regarding inclusion, and their self-efficacy regarding providing students' participation, using teaching strategies, and classroom management as sub-dimensions of the self-efficacy scale ( $r=.504$ ,  $r=.512$ , and  $r=.511$ , respectively). This result implies that, as the teachers' efficacy for inclusive practices increases, their general self-efficacy and specific efficacy concerning students' participation, teaching strategies, and classroom management also increases.

B. The arithmetic means, standard deviation, and minimum and maximum scores of teachers' level of general self-efficacy beliefs and efficacy regarding inclusive education according to demographic variables.

**Table 2:** Descriptive results according to gender

Scale	Group	N	M	SD	Min	Max
Teacher	Female	456	4.01	.49	2.79	5.00
Self-efficacy	Male	748	3.98	.48	2.75	5.00
Inclusion	Female	456	3.81	.60	2.08	5.00
Efficacy	Male	748	3.80	.59	2.08	5.00

As can be seen in Table 2, female teachers ( $x=4.01$ ,  $x=3.81$ ) had higher scores than male teachers ( $x=3.98$ ,  $x=3.80$ ) concerning levels of self-efficacy belief and efficacy for inclusive practices.

**Table 3:** Descriptive results according to occupational experience

Scale	Group	N	M	SD	Min	Max
Teacher Self-efficacy	1–10 years	195	3.91	.51	2.79	5.00
	11–20 years	408	4.03	.49	2.88	5.00
	21–30 years	325	3.98	.47	2.79	5.00
	31 years or more	276	4.03	.48	2.75	5.00
Inclusion Efficacy	1–10 years	195	3.92	.61	2.25	5.00
	11–20 years	408	3.85	.57	2.29	5.00
	21–30 years	325	3.75	.59	2.08	5.00
	31 years or more	276	3.74	.60	2.25	5.00

As can be seen in Table 3, the efficacy level of teachers with an occupational experience of 11–20 years (4.03) was higher than that of any other group. Considering the inclusion efficacy levels, the scores for the teachers with an occupational experience of 1–10 years ( $\bar{x}$ =3.92) was found to be higher than that of any other group.

**Table 4:** Descriptive results according to the status of taking a course on special education

Scale	Group	N	M	SD	Min	Max
Teacher Self-efficacy	None	591	3.96	.47	2.75	5.00
	Some	346	4.00	.51	2.79	5.00
	High	267	4.09	.49	2.83	5.00
Inclusion Efficacy	None	591	3.66	.58	2.08	5.00
	Some	346	3.85	.57	2.33	5.00
	High	267	4.09	.56	2.67	5.00

As can be seen in Table 4, the self-efficacy levels of teachers who have attended such a course for 40 hours or more ( $\bar{x}$ =4.09) were found to be higher than the levels of those who attended such a course for less than 40 hours ( $\bar{x}$ =4.00) and have never attended a course on special education ( $\bar{x}$ =3.96). Considering inclusion efficacy, the level of the teachers who have attended a course for more than 40 hours ( $\bar{x}$ =4.09) was higher than the levels of those who have attended such a course for less than 40 hours ( $\bar{x}$ =3.85) and have never taken a course about special education ( $\bar{x}$ =3.66).

**Table 5:** Descriptive results according to the status of interacting with an individual with special needs

Scale	Group	N	X	Sd	Min	Max
Teacher Self-efficacy	Yes	711	4.02	.48	2.79	5.00
	No	493	3.97	.50	2.75	5.00
Inclusion Efficacy	Yes	711	3.90	.59	2.08	5.00
	No	493	3.68	.58	2.13	5.00

As can be seen in Table 5, the self-efficacy level of teachers who had previously interacted with an individual with special needs ( $x=4.02$ ) was higher than that of those who had never interacted with such an individual ( $x=3.97$ ). Considering inclusion-efficacy levels, teachers who have previously interacted with an individual with special needs ( $x=3.90$ ) had a higher level than those who had never interacted with an individual with special needs ( $x=3.68$ ).

#### 4. Discussion

This study aimed to investigate the relationship between the teachers' self-efficacy beliefs and their efficacy for inclusion, according to various demographic variables. The results revealed that a significant relationship exists between teachers' self-efficacy beliefs and their efficacy for inclusion. Furthermore, it was determined that levels of self-efficacy and efficacy regarding the inclusion of the teachers—including the female teachers, experienced teachers, teachers who had taken courses on special education, and teachers who had previously interacted with an individual with special needs—were higher compared to other participants. In addition, the efficacy level of novice teachers regarding inclusion was found to be higher than that of experienced teachers.

First, this study investigated the relationship between the teachers' self-efficacy and their efficacy for inclusive practices. A positive and mid-level relationship was found between teachers' efficacy for inclusion and their general self-efficacy. The same relationship was found between teachers' efficacy for inclusive practices and the sub-dimensions: providing students' participation, using teaching strategies, and classroom management. In other words, as the teacher self-efficacy beliefs increase, their efficacy regarding inclusive education increases. Similar studies within the available literature also pointed out that teacher self-efficacy beliefs are an important determinant of their efficacy level regarding inclusive education (Diken, 2006; Dolapçı & Yıldız-Demirtaş, 2016; Toy & Duru, 2016). This result might indicate that teachers with a high self-efficacy believe that students with special needs can learn effectively and successfully in general-education classrooms. It might also indicate that teachers with a high self-efficacy belief also have a stronger belief regarding the successful inclusion of students with special needs into general classrooms.

Secondly, this study investigated teachers' self-efficacy and efficacy regarding inclusion according to several variables. Female participants were found to have higher self-efficacy and efficacy regarding inclusion compared to male participants. These findings are corroborated by some existing studies reporting that females have higher self-efficacy beliefs (Çapri & Çelikkaleli, 2008; Ekici, 2006), while some studies reported

that males have higher self-efficacy beliefs (Akbulut, 2006; Savran & Çakıroğlu, 2003). According to Bandura (2002), efficacy beliefs vary according to gender among different cultures. Çapri and Çelikkaleli (2008) stated that the traditional role assigned to women in Turkish society, and convincing women to this role through the discourse of their environment improves the self-efficacy beliefs of female teachers. Therefore, different results revealed in the literature may be attributable to intercultural differences. This study reported that the female teachers' level of efficacy regarding inclusion is higher than that of males. This result is consistent with that of other researches (Loreman, Deppeler, & Harvey, 2005; Romi & Leyser, 2006; Woodcock, 2011). Nevertheless, some studies revealed antipodal results indicating males have higher efficacy than females (Klassen & Chiu, 2010; Schwarzer & Hallum, 2008). Some other studies underlined the ineffective role of the gender variable on teachers' efficacy regarding inclusion (Dolapçı & Yıldız-Demirtaş, 2016; Şahbaz & Kalay 2010). It is obvious, therefore, that existing literature fails to reveal a clear reference point for researchers and so further research is needed to develop this understanding.

In the study, the experienced teachers' self-efficacy level was found to be higher than those of novice teachers. This result is consistent with those studies reporting that the self-efficacy beliefs of experienced teachers are higher (Aksoy & Diken, 2009; Diken & Özokçu, 2004; Soodak & Podell, 1993; Payne, 1994; Tschannen-Moran & Woolfolk-Hoy, 2001; Üstüner, Demirtaş, Cömert, & Özer, 2009). However, some studies reveal that self-efficacy does not vary according to teachers' occupational experience (Ekici, 2006; Hoy & Woolfolk, 1993; Tschannen-Moran & Hoy, 2007; Yılmaz & Çokluk-Bökeoğlu, 2008). The results of this study may be attributed to the fact that more experienced teachers become increasingly professional in their occupation. Conversely, this study revealed a contradictory result in that the inclusion-efficacy level of the teachers with 1–5 years or less occupational experience were higher than the level of the more experienced teachers. This result corroborates that of Toy and Duru's (2016) study, which indicates that efficacy level concerning inclusive education of teachers with 1–15 years of occupational experience was higher compared to that of relatively more experienced teachers. Some studies found no decisive effect from occupational experience on inclusion efficacy (Kaner, 2010; Korkut, & Babaoğlu, 2012; Yılmaz & Çokluk-Bökeoğlu, 2008). This result may also be attributable to the fact that teachers with 1–5 years of occupational experience have recently graduated, and therefore may have taken compulsory special education and inclusion courses which have been mandatorily implemented across Turkish educational faculties since 2008.

Teachers who took courses worth at least 40 credits on special education had higher self-efficacy and efficacy regarding inclusion. This result is consistent with the

results several other studies previous studies (Gözün & Yıkmış, 2004; Orel, Töret, & Zerey, 2004; Lancaster & Bain, 2010). Similarly, Weisel and Dror (2006) stated that courses on special education and inclusion significantly contributed to teachers' attitudes and self-efficacy. Hence, the results of this study may imply that courses taken on special education and inclusion help teachers to develop positive attitudes regarding inclusion; consequently, these positive attitudes result in an increased efficacy regarding inclusion. This result also underlines the necessity of including more courses about special education and inclusion in teacher-education programs.

Those teachers who previously interacted with an individual with special needs had higher self-efficacy and efficacy regarding inclusion. This result is consistent with the literature (Brownlee & Carrinton, 2000; Carroll, Forlin, & Jobling, 2003; Diken & Özokçu, 2004; Soodak & Podell, 1993a). The results of this study support the hypothesis that teachers who have interacted with, or that have teaching experience with students with special needs, have a higher level of self-efficacy. Diken and Özokçu (2004) and Soodak and Podell (1993a) claimed that the previous interaction and communication with students with special needs increased teachers' level of efficacy regarding inclusion. In such cases, teachers might perceive their level of efficacy regarding inclusion according to their previous interactions and experiences with individuals with special needs. The authors recommend that future studies consider the efficacy level regarding inclusion, together with the experience of teaching individuals with special needs; therefore, the relevant literature can be developed.

As is the case with every research, this study had several limitations. The data was collected from a very large sample group from the populations of five different cities located in four geographical regions of Turkey. Nevertheless, the responses of the participants in this study might not reflect the ideas of teachers from other cities located in different geographical regions. Therefore, the results of this study should be tested with different sample groups in order to mitigate this limitation and increase the generalizability of its results. Secondly, while the general self-efficacy of experienced teachers were found to be high, the inclusion efficacy of the novice teachers was also found to be high; the reasons behind this seemingly contradictory result can be investigated through further studies using both qualitative and quantitative techniques.

As can be seen in the available literature teachers' self-efficacy perceptions and their efficacy for inclusion practices both play an important role regarding their teaching occupation. Therefore, particular attention should be given when cultivating teachers' self-efficacy during both pre-service and in-service training. In order to achieve this aim, compulsory special education and inclusion courses, as well as supplementary courses, should be included in all teacher programs. Furthermore,

preservice teachers should be given the opportunity to perform teaching practices in general-education classrooms where inclusive education is being implemented under the supervision of experienced and successful teachers. This will help such teachers develop positive attitudes toward their occupation. Additionally, this study revealed that self-efficacy and the inclusion efficacy of the teachers who have taken a course on special education, and who have interacted with individuals with special educational needs was high. It can, therefore, be recommended that in-service training be provided for those teachers who have either taken a course on special education or who have interacted with an individual with special needs. Furthermore, the MoNE can provide in-service training for teachers regarding those inclusive education practices that they perceive to be insufficient, thereby contributing to the education of the students with special needs in inclusive environments.

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EFFICACY FOR INCLUSION

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