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# Response to Intervention: What do Elementary School Teachers of Students with Specific Learning Disabilities in Inclusive Classrooms in Türkiye Know?

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#### **Abstract**

As a multi-tiered early diagnosis, intervention, and support system, Response to Intervention (RtI) identifies struggling students and helps them in inclusive classrooms. This study aims to examine the Turkish elementary school teachers' knowledge level about RtI and its components. For this purpose, a basic qualitative study within the scope of qualitative research methods was conducted. Data was collected by conducting interviews with nine teachers working in inclusive classrooms with at least one student with specific learning disabilities at the elementary school level in Eskisehir, Türkiye. The data were analysed with content analysis. Results showed that participants of this study are not aware of RtI but they use some components of it in their instructions. In line with the findings, it is recommended that teachers, school administrators and policy makers in Türkiye need to expand their awareness with students with special needs and research-based practices in inclusive education, including multi-tiered interventions.

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## INTRODUCTION

Türkiye, as a European Union (EU) candidate country, has invested in educating individuals with special needs, and special education and inclusion in the national education system is quickly growing. For the last five years, the number of students in the special education system, as well as the number of students in inclusive educational environments, have rapidly increased. According to the statistical report of the Ministry of National Education (MoNE), as of the 2019-2020 school year, with a 3.71% increase, the total number of students in formal education reached 18,241,881 in the Turkish education system. Furthermore, the number of students diagnosed with special needs has increased by 47.59% and reached 425,774. The ratio of students with special needs increased to 2.33% within formal education. In terms of inclusive education, the number of students with special needs has increased by 57.19% and reached 318,300 in inclusive classrooms. The ratio of students in inclusive education increased to 74.76% within all students with special needs (MoNE, 2016; 2020). Although statistics in special education is rapidly changing in Türkiye, the provision of special education services and implementation of inclusive practices by the MoNE are historically quite new practices in the Turkish education system (Cakiroglu & Melekoglu, 2014).

As in most of the other countries in the world (Gargiulo & Bouck, 2018), the provision of special education services in Türkiye started in segregated settings. In fact, important developments in terms of special education started in the 1950s. One of the most striking developments of this period is that the planning and execution of special education services were transferred from the Ministry of Health and Social Aid to MoNE (Melekoglu, Cakiroglu, & Malmgren, 2009). The transfer of special education services from a health-related ministry to an education-related ministry is important in terms of realizing that the issue of special education should be considered as an 'education issue' rather than a 'health problem' (Kargın, 2004; Sucuoğlu & Kargın, 2006). Until today, the subject of special education and the inclusion of individuals with special needs took part in many laws and regulations and step by step reached its final form. Finally, the 'Educational Implementations by Integration/Inclusion' section was developed in the Special Education Services Law, which entered into force in 2018, and the change from an integrated approach is acknowledged throughout the legislation (MoNE, 2018a). When the implementations related to inclusion/integration are examined today, there is an effort to try to understand the current situation and improve the quality of inclusive education. In addition, there is no systematic progress and full-time inclusion has not yet started for all children with special needs. Today, there are still separate special education schools and special education classes where only individuals with special needs are educated (MoNE, 2018a). Currently, there are various special education categories, including intellectual disabilities, hearing impairments, autism spectrum disorder, visual impairments, and specific learning disabilities (SLD), in the Turkish education system. Among those categories, the category of SLD has gained strong attention in the system and literature, and all students with SLD are educated in inclusive classrooms (Melekoğlu, Erden, & Çakıroğlu, 2019).

SLD is an official special education category in the Turkish education system and the last official definition of SLD exists in the Special Education Services Regulation published in 2006. According to this regulation, students with SLD are defined as individuals who need special education and support due to their difficulties in listening, speaking, reading, writing, spelling, attention, and mathematical calculations arising in one or more of the processes of acquiring the knowledge required to understand and use the language in oral or written form (MoNE, 2006). When a student is diagnosed with SLD, they are placed in an inclusive classroom, usually in a school/classroom that they normally attend, as a student with special needs. They will obtain extra assistance in a resource room and be entitled to further support (e.g., assessment, in-class participation, etc.) in their school. Furthermore, they can receive additional one-on-one (two hours per week) and small group (one hour per week) special education support from a private special education and rehabilitation center (MoNe, 2012). In fact, students with SLD have started to receive extensive special education services after the publication of

the 'Special Education and Rehabilitation Center Specific Learning Disabilities Supportive Education Program' by the MoNE in 2009. Since then, the number of students diagnosed with SLD is continuously rising.

The number of students with SLD in the special education system has steadily increased in the last five years. According to the MoNE, 7971 students with special needs were diagnosed with SLD and received special education services in inclusive environments in the 2014-2015 school year. The proportion of students with SLD was 3.07% within the special education system (MoNE, 2017). Furthermore, in the 2018-2019 school year, with a 107% increase since the 2014-2015 school year, the number of students with SLD reached 16,478 in the special education system. The ratio of students with SLD rose to 4.13% in the special education system (MoNE, 2019). Compared to other countries (e.g., in the United States of America the ratio of students with SLD in special education is 38.2%; U.S. Department of Education, 2020), the number of students with SLD is seen as very low in the Turkish special education system. The reason behind this conflict is related to the special education assessment system for students with SLD in Türkiye (Çakıroğlu, 2020).

## ASSESSMENT PROBLEMS OF STUDENTS WITH SLD IN TÜRKİYE

Due to the lack of an early intervention program in Türkiye, the process of the diagnosis of SLD starts at the hospitals. The diagnosis that's given at the hospitals is the medical diagnosis. The medical diagnosis is given only by a healthcare committee in a public hospital or a training and research hospital. Experts from the healthcare committee determine the rate of disability based on their assessments. The ones that have a 20% or more disability rate can apply for an educational assessment to Guidance and Research Centers (GRC). At the GRC, there is a special education assessment committee that decides the assessment details of students referred for the possibility of SLD (Görgün, 2020).

# ASSESSMENT OF SLD AND RESPONSE TO INTERVENTION (RTI)

With the re-enactment of the IDEA (Individuals with Disabilities Education Improvement Act) in 2004 in the United States, an important step was taken to diagnose SLD (Fletcher & Vaughn, 2009; Glover & DiPerna, 2007; Hale, Kaufman, Naglieri, & Kavale, 2006). The discrepancy model, which focuses on the difference between the IQ-achievement score recommended in the diagnosis of individuals with SLD in the old system, has been replaced by reponse to intervention (RtI) in IDEA (Fuchs & Fuchs, 2006). The discrepancy model in which students are expected to get low scores from many different achievement tests aims to diagnose SLD (Brown-Chidsey & Steege, 2010; Reynolds & Shaywitz, 2009). In the discrepancy model, the scores of the students in these academic tests are compared with the IQ scores and it is expected that there will be a discrepancy between the scores, in other words, 'to fail'. In addition, with the discrepancy model, it is not possible to obtain any data or hint about how the education of the student who is diagnosed with SLD during or after the diagnosis process (Bradley, Danielson, & Doolittle, 2005). In the RtI, interventions are implemented without waiting for any failure from students, and students who do not respond adequately to interventions are guided to be assessed on SLD (Fuchs, Fuchs, & Zumeta, 2008). Rtl is a multi-tiered service delivery system that starts at the general education school and increases the intensity of interventions according to the students' responses to interventions (Fletcher & Vaughn, 2009). In other words, Rtl is a multi-tiered early diagnosis, intervention, and support mechanism that recognizes students who have learning difficulties and supports students in inclusive classrooms before they are left behind (Gersten et al., 2009).

Early and accurate identification of students with disabilities is critical in ensuring that students have access to interventions that will help them succeed academically (Bradley et al., 2005). It is understood that preventing learning difficulties is better than treating them and early intervention has the potential to prevent learning difficulties that may lead to the diagnosis of SLD (VanDerHeyden & Burns, 2010). Rtl is a system built on the diagnostic potential of early intervention. The purpose of Rtl

is to provide early intervention to all students at inclusive schools who are at risk of failure, that is, not only students with special needs but also students who are not diagnosed and at-risk (Fuchs & Fuchs, 2006; Glover & DiPerna, 2007). Moreover, RtI prevents students with special needs from receiving inappropriate referrals and diagnoses (Orosco & Klingner, 2010). According to Fuchs, Mock, Morgan, & Young (2003), RtI is a process that provides quality education to all students in the class while monitoring students' progress, then provides additional education to those who do not respond appropriately, and finally directs them to special education services. In other words, RtI can be defined as a student-centered assessment model that uses problem-solving and scientific-based methods to identify and address learning disabilities in students (Johnson, Mellard, Fuchs, & McKnight, 2006). RtI has key features: (a) teaching with high-quality and scientifically based methods, (b) universal screening, (c) continuous monitoring of progress, (d) intensified interventions based on students' needs, (e) monitoring progress during interventions, and (f) curriculum-based measurement (CBM; Glover & DiPerna, 2007; VanDerHeyden & Burns, 2010).

Although RtI is a multi-tiered model, it is widely applied as the three-tiered model (Gartland & Strosnider, 2020). The quality of academic intervention at each tier changes and intervention intensifies at each tier in the transitions between tiers (Fletcher, Lyon, Fuchs, & Barnes, 2019). In the first tier of RtI, all students in the general education class are taught with high quality and scientifically based methods, and all students are monitored during the teaching process (Spear-Swirling, 2015). While high-quality and scientifically based teaching aims to prevent difficulties related to learning; classroom monitoring provides early detection of difficulties if they arise (Clemens, Keller-Margulis, Scholten, & Yoon, 2016; Gersten et al., 2009). In the first tier, data is collected for two main purposes. These purposes are to identify students who need additional intervention and to determine whether the problem is specific to the student or the class the student is enrolled (Burns et al., 2016). Evaluations carried out in the first tier must be done at least three times in an academic year (Burns et al., 2016; Clemens et al., 2016; VanDerHeyden & Burns, 2010). Despite using high-quality and scientifically based instructional methods given in the first tier, approximately 20% of students in a general education class do not succeed and need the second tier of RtI (Gersten et al., 2009). In the second tier, interventions are generally implemented in small groups of two to eight pupils for elementary school classes, eight to ten students for secondary school classes, and ten to twelve or even fifteen adolescents for high school classes (VanDerHeyden & Burns, 2010). In other words, targeted and small group interventions are implemented in the second tier (Fuchs & Fuchs, 2007). While data of the first tier is important to make decisions based on screening, data in the second tier is needed to determine which prerequisite skills are missing and which teaching conditions can accelerate learning (Fletcher et al., 2019; Owocki, 2010; Silberglitt, Parker, & Muyskens, 2016). In addition to being more precise than data in the first tier, data of the second tier should be collected weekly or biweekly (Hosp, Huddle, Ford, & Hesley, 2016). The second tier data is used to monitor progress, to move students between groups when necessary, and to decide whether the intervention is effective (Silberglitt et al., 2016; VanDerHeyden & Burns, 2010). The third tier of RtI involves the most intense interventions, and generally, around 2% to 5% of the student population in a general education class needs an intervention density beyond that provided in the second tier (Berkeley, Bender, Peaster, & Saunders, 2009; Fuchs, Fuchs, & Compton, 2012). The third tier generally includes one-on-one interventions as well as high-quality and scientifically based teaching. At this tier, monitoring student performance is critical (Gersten et al., 2009). With increased sensitivity and frequency patterns, data should be collected at least once every week to monitor progress in the third tier. The data collected in the third tier plays an important role in determining the cause of academic failure (Klingbeil, Bradley, & McComas, 2016; VanDerHeyden & Burns, 2010). The purpose of the assessment in the third tier is to define an intervention that will speed up learning before the student is directed to special education services (Owocki, 2010) This tier is linked to special education because the data collected in the third tier allows for the identification of adequate and inadequate responders and provides a framework for the implementation of uninterrupted interventions between general and special education (Fletcher & Vaughn, 2009; Gartland & Strosnider, 2020; Vaughn & Fuchs, 2012).

#### THE NEED FOR THE STUDY

Starting in 2019, Türkiye is initiating a nationwide project titled 'Increasing the Quality of Special Education Services for Inclusive Education (EuropeAid/139588/IH/SER/TR)' which is co-funded by the European Union and the Republic of Türkiye. In this project, there is an intervention titled 'Response to Intervention Model' and within this intervention, tiers of modules will be prepared and designed in accordance with the Rtl Model, and the model will be implemented and tested in five pilot elementary schools in Ankara, İzmir, İstanbul, Adana and Trabzon. (MoNE, 2018b). Although this project has been carried out in the field, there is almost no research or information about teacher awareness and/or readiness for a multi-tiered intervention model, which is Rtl in this case.

Furthermore, SLD is an area that has a large proportion of students with special educational needs, but there are limited studies to improve educational opportunities. SLD, which includes problems related to learning, is observed as a problem in academic fields such as reading, writing, and mathematics (American Psychiatric Association [APA], 2013). Performing the necessary interventions in the pre-assessment process for all students who may have special education needs, including SLD, can both expedite the adaptation of the student to general education and facilitate the determination of the individual's educational needs. Providing early education interventions to students at risk of SLD plays a critical role in their future learning (Snowling, 2012). In order to provide the learning environments that students need, it should be determined whether they have SLD. In addition, studies have shown that the number of students diagnosed with SLD is reduced as a result of supporting students with appropriate intervention methods (VanDerHeyden & Burns, 2010). In Türkiye, intelligence tests for identifying individuals with SLD are used. However, scientific-based and systematic practices that can be used to meet the educational needs of individuals with SLD before diagnosis are insufficient.

In Türkiye, students with SLD often continue their education in general education classes. It is the duty of the classroom teachers to determine the educational needs of the students with SLD who receive education within the scope of inclusion practices (Melekoğlu, 2018). Considering the importance of early intervention in special education and considering the vital importance of providing scientific-based interventions early in identifying students with SLD, studies should be increased within the framework of improving the quality of education provided to these individuals in general education settings.

## **RESEARCH QUESTIONS**

The RtI model, which is one of the scientifically based models, offers early intervention to students at risk for SLD (Tuğrul-Kalaç, 2018). Since early interventions for students with SLD is required from elementary school teachers, it is important to understand how well the elementary school teachers know and apply this model and whether the appropriate intervention is given prior to diagnosis in inclusive classrooms. When the national literature was examined, there was no study to evaluate the levels of awareness elementary school teachers had about the RtI model in Türkiye.

The aim of this study is to examine whether the elementary school teachers make any distinction between students who have academic difficulties among the students in their classrooms and to assess the level of understanding the elementary school teachers have about the RtI model. For the purpose of the study, the question of "what do elementary school teachers of students with SLD in inclusive classrooms know about RtI model and its components?" will be answered.

## **METHOD**

#### **RESEARCH DESIGN**

Since this study is aimed to determine the level of knowledge of classroom teachers working with students with SLD in inclusive environments, the components, were carried out as a basic qualitative study within the scope of qualitative research methods. The qualitative research method was preferred because it allows obtaining in-depth data from the selected study group, and in basic qualitative studies, the general aim is to figure out how participants make sense of their own lives and experiences (Merriam, 2009).

#### **PARTICIPANTS**

This study received ethical clearance from the Institutional Review Board of the Eskisehir Provincial Directorate of National Education (approval date and number: 15.04.2019/7631214). Criterion sampling, one of the suggested sampling methods, was used to determine the study group. In the sampling criterion, researchers evaluate those parameters and study with participants who meet the criterion (Patton, 1990; Suri, 2011). In this study, one criterion was determined. The criterion is to be an elementary school teacher working in a classroom of a student with SLD. In order to decide which teachers are to be included in the study group, a list of schools with elementary school teachers working in a classroom of a student with SLD was requested from the Provincial Directorate of National Education. Nine schools, three from each socio-economic level, were selected from the list. One voluntary elementary school teacher from each school was selected. Each participating teacher has provided appropriate informed consent orally before the interview. The characteristics of the teachers are given in Table 1.

Teachers Grade Gender Year of Service Graduation Graduation program T1 2 Female 17 Bachelor Classroom teaching T2 2 Female 31 Junior college Classroom teaching T3 3 Female 19 Bachelor Classroom teaching T4 Female Bachelor 15 Classroom teaching T5 Male 34 Junior college Classroom teaching T6 Male 29 Bachelor Classroom teaching T7 4 Female 21 Bachelor Classroom teaching Junior college **T8** 4 Male 35 Classroom teaching T9 3 Female 22 Bachelor Landscape architecture

Table 1. Participants Characteristics

# **DATA COLLECTION TOOL**

The researchers examined the literature on components of the RtI model and a semi-structured interview technique was used for data collection. Based on the findings, interview questions were formed, and expert opinion was consulted. Three of the experts to whom the interview questions were sent have a PhD in special education and two of them in the field of research methods and are experienced in qualitative research. The experts shared their opinions about the interview questions by examining whether the questions covered the subject, whether they were comprehensible and clear. The researchers rearranged the interview questions, according to the feedback from the experts.

In order to determine whether the questions are clear and comprehensible by the teachers, pilot interviews were conducted with three elementary school teachers who are continuing their master's education in the field of Education Management. In the pilot interviews, a personal information form and interview questions were used together with a digital voice recorder with the permission of the participants. It was determined that the questions asked in the pilot interview were understandable and the interview questions were finalized after the pilot interviews. The final interview form included 26 questions. While 14 of the questions aimed to determine the demographic and educational information of participants, 12 of the questions aimed to find out participants' knowledge about RtI. The questions about RtI also had follow up questions in order to get more detailed information. Questions about demographic and educational information included questions like "Which faculty and department did you graduate from?", "Have you attended any training on inclusion and/or special education? If yes, what kind of training did you attend?". Some of the questions related to RtI were "What do you know about whether the primary school Turkish and/or mathematics curriculum has been developed on a scientific basis?", "Do you carry out any different practices for students who perform poorly according to the assessments you made in Turkish and/or mathematics courses? If yes, what kind of different accommodations do you make and how, can you explain?".

#### **INTERVIEW PROCEDURE**

In order to determine the level of knowledge of the elementary school teachers, working in a classroom of a student with SLD, semi-structured interviews were conducted with voluntary elementary school teachers. All interviews were conducted by the second and fourth authors, and they were master's student in the special education program. They took the scientific research methods course during their master's education. An interview guide was prepared by all the authors and pilot interviews conducted according to the interview guide. Interviewers were prepared by conducting pilot interviews and evaluating pilot interviews according to interview guide with first author who has doctoral degree in special education. Before the interviews, the second and fourth authors called the schools and made appointments with the teachers. Then they went to schools to conduct the interviews. The interviews were conducted in the school principals' room. Interviews were recorded with a digital voice recorder. Before the interviews, the authors met with the teachers. Then interviewers asked for permission to record the interview. Only one of nine teachers didn't want to be recorded. That teacher wrote the answers to the interview questions instead. All the remaining interviews were audio recorded. Each interview took between 15-28 minutes. Average duration of the interviews was 20 minutes and 10 seconds.

# **DATA ANALYSIS PROCEDURE**

The data obtained from the interviews conducted during the research process were analyzed through content analysis. The main purpose in content analysis is to reach the concepts and relationships that will help explain the data collected. Data is extensively processed in content analysis and new concepts are discovered. The basic process in content analysis is to gather similar data within the framework of certain concepts and themes and to interpret them in a way that the reader can understand (Yıldırım & Şimşek, 2008). Within the scope of content analysis, audio recordings of interviews were written, and interview transcripts were prepared by using inductive approach. The frequencies of the codes and themes that were generated as a result of the interviews were calculated and the data digitized.

# **TRUSTWORTHINESS**

The term of trustworthiness is used for qualitative studies' validity and reliability (Guba & Lincoln, 1982). According to Guba (1981), trustworthiness of a qualitative study can be explained by four terms such as credibility, transferability, dependability, and confirmability. To increase trustworthiness of this study, peer debriefing about research method and interview questions, purposeful sampling, detailed description of the participants and researcher triangulation measures

were taken. Also, the research data were independently coded by the first and second authors. After the categories were developed, the codes were rearranged, and the coding keys filled in. The consistency between codings was compared by the third author. Reliability data was calculated by Miles & Huberman's (1994) (  $\frac{consensus}{(consensus+disagreement)}*100$ ) formula. According to the results of these two codings, the agreement was calculated at 98%. Coding disagreements were discussed with all authors and a joint decision was reached.

## **FINDINGS**

#### THEME 1: SCIENTIFIC BASIS OF THE CURRICULUM

The first theme obtained as a result of the content analysis is 'scientific basis of the curriculum.' Three sub-themes have been determined under this main theme. These sub-themes are scientifically developed, curriculum incomplete or inadequate, and not scientific. The frequencies of the teachers' responses are included in Table 2.

Theme Sub-themes		n	%
Scientific Basis of the Curriculum	Scientifically developed	5	45.45
	Incomplete or insufficient	3	27.27
	Not scientific	3	27.27
TOTAL		11	100

**Table 2.** The Scientific Basis of the Curriculum

Teachers have opinions about the scientific foundations of the Turkish elementary school and the curriculum of Mathematics. Some of these opinions are as follows.

'...I think there is definitely a scientific base for the curriculum' (T9), '... I am implementing the program, but the program is insufficient for me' (T7), 'I don't think it was developed scientifically. Especially if we look at the level of inclusion, not at all.' (T5).

# THEME 2: DETERMINATION OF THE EFFECTIVENESS OF METHODS

When teachers were asked about the strategies they used, they indicated 'direct instruction, question-answer, drama, by doing and living, showing and doing.' 'I use reading and drama methods in Turkish lessons. In mathematics, I use methods such as animation, showing, and doing. In addition, I use internet content such as Morpha Campus and EBA [Eğitim Bilişim Ağı - Educational İnformation Network]. I draw the subject on the board and visualize it. I use encryption, coding techniques.' (T4) The above statement is an example of teachers using various methods. In addition, various answers were given when the teachers were asked how they present teaching according to the performance level of their students. The teachers' answers were 'using images, repeating the narration, gamification, small group instruction, asking one-on-one questions, choosing course materials according to student level and assign assignments according to the student's level.'

As a result of content analysis, how teachers recognize that the teaching strategies they use are effective was defined as the second theme. There are three sub-themes relating to the theme of 'determination of the effectiveness of the methods.' These sub-themes are a result of the evaluations, students joining the lesson with pleasure, and from parents' feedback. The frequencies of the teachers' responses are included in Table 3.

**Table 3.** Determination of the Effectiveness of Methods

Theme Sub-themes		n	%
	As a result of the evaluations	9	75
Determination of the effectiveness of methods	Students joining the lesson with pleasure	2	16.67
	From parents' feedback	1	8.33
TOTAL	L	12	100

Teachers have opinions about the determination of the effectiveness of methods. Some of these opinions are as follows.

'It depends on the success of the exam.' (T1), 'From children attending the class with enjoyment and the correct answers I obtained from the questions I asked.' (T4), '... that's how I understood, when I asked the children the questions that they answered. And the feedback from parents as well.' (T3).

#### **THEME 3: SCIENTIFIC BASE OF METHODS**

As a result of the content analysis, the third theme is determined as 'the scientific base of methods.' When asked questions about teachers' knowledge of scientific evidence, four sub-themes were determined as a result of their answers. The frequencies of 'none-scientific data, the use of suggested methods on the Internet and in lectures, the use of methods used by all in their class and researching which method is the best from different sources' sub-themes are included in Table 4.

Teachers have opinions about the scientific base of methods. Some of these opinions are as follows.

'... whether the methods we use are scientific or not does not really interest me. It is not so important to be scientific, when it comes to learning and achievement' (T5), '... we got this training. We have learned which learning method is more effective.' (T3) and 'From the internet.' (T4), 'So I apply the method that all teachers work in their classroom.' (T1), 'As I said, I am researching again, which is the best method? By looking at facts from various sources.' (T7).

**Table 4.** Teachers' Knowledge of Scientific Evidence

Theme	Sub-themes		%
	Not interested in scientific evidence	3	37.5
6	Use methods recommended on the Internet and in seminars		37.5
Scientific base of methods	Use the methods everyone uses in their class	1	12.5
	Researching which is the best method from different sources	1	12.5
TOTAL		8	100

# THEME 4: CURRICULUM-BASED MEASUREMENT (CBM)

As a result of the content analysis, the fourth theme is 'curriculum-based measurement'. When teachers were asked how they evaluate Turkish and Mathematics lessons; they indicated making a written or verbal assessment and making the students read. When they were asked about how often they conduct the assessment; they answered that 'once a week, at the end of each unit and at the end of each lesson.' There are three sub-themes belonging to the theme of 'curriculum-based measurement'. These sub-themes are not knowing, making evaluations on the topics in the curriculum, and making written and verbal assessments. The frequencies of the teachers' responses are included in Table 5.

Table 5. Teachers' Knowledge of CBM

Theme	Sub-themes		%
	Not knowing	6	66.67
Curriculum-based measurement	Making evaluations on the topics in the curriculum	2	22.22
	Making written and verbal assessment	1	11.11
TOTAL		9	100

18

100

Teachers have opinions about how they evaluate Turkish and Mathematics lessons. Some of these opinions are as follows.

'I have no idea.' (T4), 'Evaluation of the issues we handle. I make an evaluation at the end of the unit; I make an evaluation that way.' (T1), 'There are multiple-choice questions. There are true-false questions that require explanation.' (T7).

## THEME 5: PRACTICE FOR LOW PERFORMING

As a result of the content analysis, the fifth theme is 'practice for low performing'. When the teachers were asked about the practices they did when they realized that the students did not understand the subject, they provided various answers. 'Taking a break and repeating the topic, using a different method to retell the subject, developing extra materials, and retelling the topic using them and trying to understand where the problem is' are the practices of teachers. Seven sub-themes were determined for the main theme 'practice for low performing'. The sub-themes are repeating the subject, interact with the student individually, meet with the family, doing extra studies, making an assessment appropriate to the level of the student, intervening after determining the cause of the problem, and guiding students to read books. The frequencies of the teachers' responses\_are included in Table 6.

Theme Sub-themes % n Repeating the topic 6 33.33 Working individually with the student 3 16.67 Meeting with the family 3 16.67 Doing extra study 3 16.67 Practice for low performing Making an assessment appropriate to the level of the student 1 5.56 Intervening after determining the cause of the problem 5.56 1 Guiding students to read books 5.56 1

**Table 6.** Teachers' Practices for Low Performing Students

Teachers have opinions about the practices for low performing students. Some of these opinions are as follows.

**TOTAL** 

'I do something over and over again. I repeat the topic. I return after a while.' (T1), 'We prepare questions again according to the level of our students. Or we have individual studies for them.' (T2), 'I also ask for support from their families by showing exactly what they cannot do for students with low performance.' (T4), 'I'm doing additional studies.' (T5), 'I meet with the children first. We are trying to find the cause of the problem. After that, if there is a big problem, we step in with the family. We are doing extra work. Determining what to repeat helps me identify things s/he doesn't understand. You know, I repeat from time to time. If it is about not understanding, then we have repetitions.' (T9), 'I direct them to read more books. I already know that this is the biggest shortcoming.' (T3).

# THEME 6: CHARACTERISTICS OF STUDENTS RECEIVING SMALL GROUP INSTRUCTION

When the teachers were asked about their use of the small group instructional method in their classrooms, five teachers indicated using small group instruction while four teachers mentioned that they are not using small group instruction in their classrooms. As a result of the content analysis, the sixth theme is 'characteristics of students receiving small group instruction'. Four sub-themes were determined for this theme. These sub-themes are students with disabilities, students who have trouble reading and/or comprehension, refugee students, and students who have not come to school for a long time. The frequencies of the teachers' responses are included in Table 7.

**Table 7.** Characteristics of Students Receiving Small Group Instruction

Theme	Sub-themes	n	%
	Students with disabilities	2	33.33
Characteristics of students receiving small	Students who have trouble reading and/or comprehension	2	33.33
group instruction	Refugee students	1	16.67
	Students who have not come to school for a long time	1	16.67
-	TOTAL	6	100

Teachers have opinions about the characteristics of students who have been provided small-group instruction. Some of these opinions are as follows.

'We work to train those with learning difficulties from autistic students to other students.' (T8), 'I do it for children with reading and comprehension difficulties.' (T1), 'I teach one-on-one with my refugee students. Also, illnesses occur frequently during some periods. For example, there are those who do not come regularly. When the student comes to school, I immediately complete the lessons that they missed.' (T5).

## THEME 7: EFFECTIVENESS OF METHODS USED IN SMALL GROUP INSTRUCTION

As a result of the content analysis, the seventh theme is 'effectiveness of methods used in small group instruction'. When teachers were asked about the methods, they used in small group instruction; they indicated that repeating topics, question-answer, gamification, direct instruction, peer instruction, and involving students in the process. When they were asked about how they understood if their methods were effective, they gave various answers. Four sub-themes were determined for the theme 'effectiveness of the methods used in a small group instruction'. The sub-themes are reassessing and evaluating the progress, based on student feedback, and based on improvements in students' attention, and when reaching the classroom level. The frequencies of the teachers' responses are included in Table 8.

Teachers have opinions about the effectiveness of the methods teachers use in small group instruction. Some of these opinions are as follows.

'By doing small individual exams for them again, I assess whether they have learned or not.' (T2), 'Their reading speeds are up, for example, they become more active in understanding. They used to understand the subject after I had told them twice. Now for example, I explain it once, and they complete the task. I feel like I see the benefits that way.' (T1), 'I defined it according to the success of the students. That is, depending on whether he/she has achieved the same level as the other students in the class.' (T8).

**Table 8.** Teachers' Opinions About the Effectiveness of the Methods They Use in Small Group Instruction

Theme	Sub-themes	n	%
Effectiveness of methods used in small group instruction	Reassessing and evaluating the progress	2	40
	Based on the student feedback	1	20
	Based on improvements in students' attention	1	20
	When reaching classroom level	1	20
TOTA	AL .	5	100

## THEME 8: CHARACTERISTICS OF STUDENTS RECEIVING ONE-ON-ONE INSTRUCTION

The eighth theme resulting from the content analysis is 'characteristics of students receiving one-on-one instruction'. When teachers were asked if they lectured one-on-one students, eight of them answered 'yes, I did', one of them answered 'no, I didn't'. The teachers who lectured one-on-one were asked about the characteristics of the students, and then four sub-themes were identified.

The sub-themes are students with disabilities, students below the grade level, students above the grade level, and students having difficulty expressing themselves. The frequencies of the teachers' responses are included in Table 9.

Theme Sub-themes		n	%
Characteristics of students receiving one-on-one instruction	Students with disabilities	5	45.5
	Students below the grade level	4	36.4
	Students above the grade level	1	9.05
	Students having difficulty expressing	1	9.05
	themselves		
TOTAL	-	11	100

Teachers have opinions about the characteristics of students receiving one-on-one instruction. Some of these opinions are as follows.

'I lectured my mainstreaming students one-on-one.' (T4), '...I need an individual study. Others also made progress, for example, last year they became literate, learned letters. But if this student didn't yet, he/she already shows herself/himself that there is a problem with this him/her.' (T2), 'There are many gifted students in my class who want to solve extra questions much above the level of the classroom... I often sit down and solve extra questions together with those students.' (T3), 'I lectured one-on-one to a student with forgetfulness and speech difficulties.' (T6).

## THEME 9: EFFECTIVENESS OF METHODS USED IN ONE-ON-ONE INSTRUCTION

As a result of the content analysis, the ninth theme is 'effectiveness of methods used in one-on-one instruction'. When teachers were asked about the methods they used in one-on-one instruction; they answered that they use question-answer, direct instruction, gamification, and peer instruction. When they were asked about how they understood if the methods are effective, some of the teachers answered they evaluated first and saw that the methods were effective. Some of them answered that they think it's effective without evaluation. Two sub-themes have been established and the sub-themes are focused on evaluations and assumptions. The frequencies of the teachers' answers are included in Table 10.

Table 10. Teachers' Opinions on the Effectiveness of the Methods They Use in One-On-One Education

Theme	Sub-themes	n	%
Effectiveness of methods used in one-on-one instruction	Based on assessments	4	57.2
Effectiveness of methods used in one-on-one instruction	Based on assumptions	3	42.8
TOTAL		7	100

Teachers have opinions about their determination process about the effectiveness of the methods they use in one-on-one instruction. Some of these opinions are as follows.

'I found that the methods I used were generally very effective. We evaluated whether it was effective or not with our guidance teacher by calling the student to the guidance room every month. I think this is very effective. S/he started to feel confident. Until the first grade and even half of the second grade, his/her disharmony has completely disappeared, he/she is now in harmony with his/her friends.' (T6), 'I think one-on-one training is very effective. But while dealing with students in the classroom, I cannot do one-on-one instruction with mainstream students.' (T4).

#### THEME 10: THE PROCESS OF IDENTIFYING SPECIFIC LEARNING DISABILITIES

When teachers were asked about Response to Intervention, all the teachers answered that they have never heard it. So, these interviews were the first time that those participants heard the term Response to Intervention. As a result of the content analysis, the tenth theme is 'the process of identifying specific learning disabilities.' Six of the teachers took part in the diagnosis of the student

but only five of the teachers expressed their opinions about the conclusion process of the student's specific learning disability. Three sub-themes were determined for this theme. The sub-themes are different from other students, very low performance in class, and 'not willing/doing requested tasks.' The frequencies of the teachers' answers are included in Table 11.

Teachers have opinions about their conclusion process of the student's specific learning disabilities. Some of these opinions are as follows.

'I noticed it in the first 10 days of starting school. Because he was a very different student.' (T6), 'We did not make any progress in 1st grade. S/he never learned the letters. At the beginning of the 2nd class, I directed her/him to Guidance and Research Center. Her/his learning level was very, very backward, s/he immediately forgot what s/he learned, could not express herself/himself.' (T4), 'I was asking why. S/he was saying s/he loved the school and the lessons, and s/he was happy to come to school. But when it came to read, something was happening, I mean there was something pushing the student away.' (T1).

**Table 11.** The Process of Teachers to Conclude That the Student Has Specific Learning Disabilities

Theme	Sub-themes	n	%
The process of identifying specific learning disabilities	Different from other students	2	40
	Very low performance level in class	2	40
	Not willing/doing requested tasks	1	20
TOTAL		5	100

## THEME 11: DIFFERENTIATION BEFORE REFERRAL TO EVALUATION FOR SPECIFIC LEARNING DISABILITIES

The last theme that content analysis yielded is 'differentiation before referral to evaluate specific learning disabilities'. Six of the teachers expressed their opinions on this subject because they took part in the diagnosis of the student. Some of the teachers stated that they made differences in the teaching process before the student was diagnosed. Some others stated that they directed the student to be diagnosed without making any difference. Five sub-themes were determined for this theme. The sub-themes are working individually with the student, no differentiation, making extra interesting for the student, using images and materials, and using peer instruction. The frequencies of the teachers' responses are included in Table 12.

**Table 12.** Teacher's Status of Differentiating the Teaching Process Before Referring Students Who Have Specific Learning Disabilities

Theme	Sub-themes	n	%
	Working individually with the student	2	33.3
	No differentiation	1	16.6
Differentiation before referral to evaluation for specific learning disabilities	Making extra interesting for the student	1	16.6
	Using more images and materials	1	16.6
	Using peer instruction	1	16.6
TOTAL		6	100

Teachers have opinions about making changes in teaching before guiding the student to be diagnosed. Some of these opinions are as follows.

'I worked individually with that student; I already knew that the student was not at the grade level. That's why I turned a little more towards individual instruction.' (T2), 'For example, I was more interested so that s/he would love to read and like me. If I was interested 2-3 minutes with other children, I was interested in her/him for 5 minutes or until s/he finishes.' (T1).

# **DISCUSSION, CONCLUSION AND IMPLICATIONS**

In this study, the opinions of teachers on the intervention process for students with SLD and their level of information on the Rtl model and its components has been assessed. Overall, results indicated that Turkish classroom teachers do not know the Rtl model, but they integrate some components of the model into their instruction in a limited way. Besides, teachers are not aware of the importance of scientifically based instructional methods and interventions.

The findings of this study revealed that teachers mostly believe that the instructional curriculum has been scientifically developed but some teachers are not interested in the scientific evidence of the curriculum and instructional methods. These findings support previous studies that yielded teachers' ignorance about scientifically based practices and their inability to use those practices in their classrooms (Gable, Tonelson, Sheth, Wilson, & Park, 2012; Jones, 2009; Stormont, Reinke, & Herman, 2011). Moreover, the current study has similar results with the literature in terms of the limited knowledge level of teachers and the utilization of scientifically based practices in classrooms (Alhossein, 2016). The reason behind the limited understanding and the employment of scientifically based practices may be because of inadequate teacher training programs in terms of gaining a knowledge base regarding the scientific background of instructional practices and curriculum, and getting equipped with scientifically based instructional methods, to accommodate students with special needs in inclusive classrooms.

Furthermore, this study has shown that Turkish classroom teachers provide support for low-performing students but are also limited to re-teaching practices. These results are in line with the findings of previous studies in terms of the teachers' approach to providing extra support for students with low performance usually by offering additional instructions (Ekstam, Linnanmäki, & Aunio, 2015; Konstantopoulos & Sun, 2012). Especially, students with special needs may require various types of support in inclusive classrooms (Thousand & Villa, 2005). Although providing some type of support can be considered important for struggling students in the classroom, teachers' limited knowledge about different types of support for low performing students as well as students with special needs in inclusive classrooms may be due to insufficient theoretical and practical knowledge about individualization and differentiation of instruction.

In terms of the instructional approach, this study has shown that teachers prefer small groups and one-on-one instructions with their students with special needs. This finding is parallel with the literature in terms of the importance of small group instruction for students with special needs to meet their educational needs and the critical importance of one-on-one instruction for students with more intense educational needs (Collins, Gast, Ault, & Wolery, 1991; Fuchs & Fuchs, 2006; VanDerHeyden & Burns, 2010). Teachers' statements about using small group and one-on-one instruction with students with special needs can be considered positive in terms of inclusive classroom atmosphere in Turkish schools. However, the implementation of instructional practices should be evaluated in terms of adequacy and fidelity for effective implementations.

According to the findings of this study, teachers in Türkiye use a limited number of teaching and assessment methods (e.g., direct instruction, cooperative learning, peer tutoring, formative assessment, evaluation, and providing feedback) in their classrooms. This result shows that teachers do not embrace some evidence-based practices for inclusive education including metacognitive strategies, concept mapping, reciprocal teaching, and functional behavioural analysis (Hornby, 2014). Moreover, the current study yielded that, teachers use smart boards in their classroom and their technology use is usually limited to these boards. This finding supports the literature on the use of technology for students with special needs (Alammary, Al-Haiki, & Al-Muqahwi, 2017; Chmiliar, 2007; Copley & Ziviani, 2004; Sydeski, 2013). The reason for not being able to utilize various evidence-based practices and different assistive technologies that support inclusive education may be insufficient

practical knowledge about evidence-based practices and assistive technologies to facilitate inclusion, and not being able to access various assistive technologies.

Furthermore, findings of the current study indicated that teachers evaluate the effectiveness of their instruction with limited and subjective resources including feedback from students and personal assumptions. These findings are contrary to the literature on using various approaches for assessment in small group teaching (Gillies, 2007). Although teachers in Türkiye evaluate their instruction in limited ways, the process of the evaluation also sounds vague. The reason that teachers in Türkiye cannot extensively and systematically evaluate their instruction may be related to the limited knowledge about assessment and evaluation, especially in inclusive classrooms.

As an important finding of this study, the majority of participating teachers in Türkiye have no idea about CBM. On the contrary, Yell, Deno, & Marston (1992) indicated that teachers are familiar with CBM. Furthermore, Eckert, Shapiro, & Lutz (1995) concluded that both special education and general education teachers widely use CBM. According to the current study results, teachers who have an idea about CBM stated that they conduct assessments about topics in the curriculum. Although teachers indicated using evaluations to make decisions, their evaluation process is unclear. The reason behind this unawareness of CBM may be teacher training programs in Turkish universities. There aren't any courses focused on CBM or any other specific measurement, especially regarding inclusive practices and students with special needs. In addition, as aforementioned, there is not a multi-tiered intervention model in Türkiye. Therefore, teachers do not need any systematic measurement about the curriculum, and they do not know anything about CBM.

Based on the results of the study, teachers who took part in the diagnosis process specified specific criteria before referring to special education assessment. Similar findings have emerged in terms of the decision of teachers for special education referrals (Dunn, Cole, & Estrada, 2009; Smeets & Roeleveld, 2016). In addition, the majority of teachers also stated they made some differentiations before they refer students to special education services. In general, teachers who made differentiation expressed that they spent more time with students and provided extra support for them. Young & Gaughan (2010) reached similar results to this study. In their study, a pre-referral team recommended several pre-referral intervention types to teachers and teachers selected pre-referral interventions that suit them. Some of the most common and preferred pre-referral interventions were similar to this current study. Even though teachers have no idea about RtI, they implement some components of RtI.

# **LIMITATIONS**

There are several limitations that may impact the interpretation of findings and discussion of this study. The first limitation of this study is the number of participants. There was a total of nine participating teachers in this study. Furthermore, another limitation is having participants from one province of Türkiye. All participating teachers were working in central schools in Eskisehir province. Moreover, having only teachers with 15 years and above teaching experience, as participants is another limitation of this study. Newly graduated classroom teachers usually do not work in city centers and therefore they were not participants in this study.

# CONCLUSION

In conclusion, this study indicates that Turkish elementary school teachers who participated in this study are not aware of RtI and its components but some of them implement some components of RtI unconsciously. Since the MoNE is planning to start implementing RtI in Turkish schools to improve the quality of inclusive education and spread those implementations throughout Türkiye, teachers need to be well trained regarding all components and implementation steps of RtI. Furthermore, participating teachers are not well equipped in terms of knowledge about research-based practices and questioning the research base of the curriculum as well as instructional methods. Moreover, students with special needs, especially with learning disabilities, are not well recognized and supported

by their teachers in terms of early diagnosis as well as early intervention. Because all students with learning disabilities are enrolled in inclusive schools and there is no special school for those students, it is vital that teachers in regular education understand and intervene with those students with learning disabilities. Overall, this study highlights the importance of extensive training of teachers during preservice as well as in-service in terms of students with learning disabilities, effective inclusive practices, and multi-tiered intervention procedures, such as the RtI process.

#### **IMPLICATIONS FOR PRACTICE**

This study's findings yielded several implications for educators, administrators in MoNE, and policy development. First of all, educators need to expand their awareness with students with special needs, especially with learning disabilities, and research-based practices in inclusive education, including multi-tiered interventions, such as RtI. Since the inclusion of students with special needs has become a widespread implementation in the Turkish education system, it is inevitable to confront students with special needs for teachers in regular education, especially for classroom teachers in elementary education. Teachers should seek and demand in-service training regarding the aforementioned topics and teacher candidates should also take more classes during their college years regarding students with special needs as well as inclusive practices. Teachers can also pursue an education that yields certificates and graduate degrees in inclusive practices. Furthermore, teachers need to regularly follow updates on recent research on teaching students with special needs in inclusive environments by reading new publications and research journals in the field.

In terms of administrators in MoNE, all general directorates should work in coordination and focus on improving the quality of inclusive education at all levels of the education system. Initially, administrators need to increase types as well as the quality of inclusive education support for teachers and students. MoNE should assign at least one special education and/or inclusive education expert/teacher to all schools as the coordinator of inclusive education. In fact, the number of coordinators can be arranged according to the number of students with special needs in the school. These coordinators need to provide support for teachers in terms of various inclusive practices as ideas and hands-on implementations. In addition, these coordinators can provide resource room support for students with special needs. Furthermore, administrators in MoNE should develop research projects with experts in special education and inclusive education to improve the quality of inclusive practices in Türkiye. These projects may focus on improving teacher's awareness on inclusive education as well as developing a multi-tiered intervention model for inclusion in line with the dynamics of the Turkish education system. In addition, the administrators in MoNE should form various resources, including handbooks, booklets, etc. regarding students with special needs and inclusive education for teachers to apply.

The policy is the center for inclusive practices and policymakers in MoNE need to establish various policies that need to formulate more inclusive practices and outline the details of effective inclusive education in Türkiye. First of all, there should be a separate regulation in terms of inclusive education in Türkiye. In regulations related to inclusive education, research-based practices as well as multi-tiered intervention models, including Rtl, should be more emphasized and outlined in detail. Secondly, policymakers need to establish new regulations about inclusive education support systems in regular education. There is an urgent need for policy in terms of special education coordinators in inclusive schools, co-teaching in inclusive classrooms, resource room support, and support for struggling students without disabilities.

#### **FUTURE RESEARCH**

This study was conducted with nine teachers working in Eskisehir province in Türkiye. In addition, those participants were classroom teachers working in 1-4 grades. In fact, more studies need to be conducted regarding the teachers understanding about inclusive practices as well as multi-tiered interventions, including RtI with teachers from various provinces in Türkiye. Furthermore, since the

participants of this study were relatively experienced teachers, future researchers may replicate this study with newly graduated or less experienced teachers. In addition, the implementation of teachers in inclusive education needs to be extensively researched. Besides, studies using different technologies and technological tools can be planned on the teaching of students with special needs in inclusive classrooms.

Moreover, teacher assessments in inclusion are critically important for the quality of inclusive education and more in-depth research is needed about the assessment and evaluation process in inclusive classrooms and assessment skills of teachers. In addition, research needs to be conducted to improve teacher background as well as an approach regarding research-based practices in inclusion. Furthermore, various training needs to be developed regarding inclusion and multi-tiered interventions, including RtI, for Turkish teachers in regular education and studies need to be conducted to evaluate the impact of those training on teacher knowledge as well as implementations. Additionally, in order for the special education referral process to be more systematic, there should be a multi-tiered intervention model that fits the Turkish education system. Researchers should conduct a study on developing a multi-tiered intervention model in pilot schools as a case study.

#### **AUTHOR CONTRIBUTIONS**

- The first author made significant contributions to the design of the study, the structuring of all parts of the manuscript, and the analysis of the data.
- The second author made important contributions to data collection, analysis and drafting of the manuscript.
- The third author has made important contributions to data analysis and drafting of the manuscript.
- The fourth author has important contributions to data collection, introduction, and methods sections of the manuscript.

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