TUARA The Universal Academic Research Journal

Teacher Opinions on the Process of Preparing, Implementing, and Evaluation of an Individualized Education Program for Primary School Mathematics Courses[1]

Tunahan Filiz[2]

ARTICLE INFO

Article History:
Received 31.08.2023
Received in revised form 30.09.2023
Accepted
Available online: 15.10.2023

ABSTRACT

Eliminating the problems experienced in the process of IEP preparation, implementation, and evaluation in the mathematics course can ensure that students benefit from IEP activities in a way that they do not fall behind their peers. This study aims to explore the views of classroom teachers who have inclusive students in their classrooms on individualised education programme preparation, implementation, and evaluation in mathematics lessons. The research was designed using the phenomenology method, a qualitative research method. The participant group of the study consisted of 22 classroom teachers with inclusive students. The research data were collected face-to-face during the second semester of the 2022–2023 academic year through a semi-structured interview form. In addition, observation and document review methods were used to support the data obtained from the interviews. The content analysis method was used to analyze the data. Because of the content analysis, the data were organized and interpreted under the themes of individualised education programme preparation, implementation, and evaluation in mathematics lessons. Because of the research, it was determined that classroom teachers could not find appropriate and sufficient materials and could not get expert support in the process of Individualized Education Program implementation in mathematics courses. In addition, it was found that classroom teachers were inadequate in monitoring and evaluating the Individualized Education Program in mathematics and used non-standard measurement and evaluation tools. Experimental studies are needed to assess whether or not the Individualized Education Program preparation, implementation, and evaluation process improves students' achievement in mathematics.

Keywords:
Primary school mathematics course, individualized education program, classroom teachers, monitoring and evaluation

INTRODUCTION

Individualized Education Program (IEP) is a written program that includes support education for students with special needs, considering the educational performance of students with special needs, what the target outcomes are, where, by which methods, how long and by whom these outcomes will be gained (Kargın, 2022). The content of this program includes long- and short-term goals, the student's current educational performance, arrangements for the educational environment, teaching methods and strategies to achieve the goals, teaching materials, and evaluation methods (Special Education Services Regulation [SESR], 2018). While preparing the IEP, the goals are determined by considering the curriculum that students follow in general education classes, their developmental characteristics, educational needs, and educational performance (Kargın, 2022). In addition, by monitoring and evaluating the IEP, an effective program that considers student needs and allows individualization of teaching can be prepared.

IEP preparation refers to the process of creating individual education plans in accordance with the individual's special education needs and learning styles, 2022). Through such programmes, educators support students' strengths and focus on their weaknesses. In the process of preparing an IEP, the student should be evaluated, and the student's current level of knowledge, learning style, and special needs should be determined (Rashid & Wong, 2023). Learning goals that show what the student should learn or achieve in a certain period of time should be determined (Hott et al., 2020; Shriner et al., 2013). In the IEP implementation process, the individualised education programme, which is prepared based on the needs and goals of the students, is applied to the students with special materials (Çilingir & Artut, 2017; Durmuş & Ergen, 2021) and teaching strategies to attract the student's interest (Kargın, 2022). In the IEP evaluation process, student progress is monitored and evaluated continuously and schematically (Özdemir & Kılıç, 2023). Student evaluations can be made using methods such as portfolios and interviews (Gürsel, 2017).

Plans that show what kind of arrangements teachers can make to help all students in the classroom acquire the targeted behaviours are defined as individualisation of teaching (Janney & Snnel, 2006). A teacher

[1] This study was accepted as an abstract at the 6th International Turkish Computer and Mathematics Education Symposium (TURCOMAT-6).
[2] Bayburt Üniversitesi, tunahanfiliz@gmail.com, https://orcid.org/0000-0002-3149-8783

who aims at the development of all students in their class should be able to make the necessary arrangements by considering the needs of the students. Instructional arrangements are needed so that students with characteristics different from those of their typically developing peers can learn individually and participate in classroom activities (Sucuoğlu & Kargın, 2006). To support learning in such a way that no child is left behind, it is necessary to organize classrooms to meet students' individual needs (Rosenberg et al., 2010). Within the scope of individualizing teaching, arrangements are made for physical arrangements, teaching processes, and classroom climate (Smith et al., 2011). Approximately half of the students in general education classes, whether they have a diagnosis or not, cannot respond to the teaching in the classroom (Kargın, 2022). In this respect, individual education programs prepared for students can help them respond to classroom instruction.

In Turkey, some inclusive students continue their education according to their needs in the least restrictive educational environment, i.e., general education classes. According to the regulation (SESR, 2018), the education of these students is conducted with individualized education programs that consider student needs. In the studies conducted, it was determined that teachers were inadequate in preparing and implementing individual education programs and encountered various problems in the process (Avcıoğlu, 2011; Öztürk & Eratay, 2010). In this respect, determining the problems experienced by teachers can contribute to the preparation of action plans to overcome the difficulties encountered in the process and individualization of teaching.

When a program suitable for students' individual needs is not prepared and implemented, teaching with other students in the classroom does not have the expected effect on students (Yüksel et al., 2020). Therefore, determining teachers' views on preparing, implementing, and evaluating individual education programs can contribute to the individualization of teaching (Aas, 2022; Nunez & Rosares, 2021). In this direction, it may be useful to investigate the experiences of classroom teachers, who have critical importance in the education of students and interact with students more than other stakeholders in the teaching process on IEP preparation, implementation, and evaluation.

Students with special needs must acquire the necessary skills for an independent life in daily activities (Kırcaali-İftar et al., 2008). Shopping using money, reading and telling time, reading and writing at a basic level, and performing the four basic operations are among the functional academic skills we frequently use daily. Students with special needs require mathematics both academically and in daily life. Teachers are expected to provide individuals with special needs arithmetic operations and problem-solving skills (Özkubat & Özmen, 2018). Supporting primary school students with special needs in mathematics teaching can support students academically, socially, and emotionally. Supporting students with special needs through an individual education program in learning and teaching mathematics can increase their school success and facilitate their daily lives.

It is estimated that 5-8% of all students attending school have special educational needs in mathematics (Geary, 2011). When students with special needs attending primary school are not supported by their individual needs in mathematics, they are significantly behind their peers (Bender, 2016; Wei et al., 2012). This situation, expressed by the concept of cumulative deficiency, may cause students to experience academic and social problems. On the other hand, it is emphasized that every child can learn mathematics when the necessary conditions are provided (National Council of Teachers of Mathematics, 2000). In addition, when the Mathematics Curriculum (2018) is reviewed, students should be raised as individuals who have acquired the essential reading and mathematics skills needed in daily life and school life by their developmental levels and use them effectively (Ministry of National Education [MoNE], 2018). Therefore, it is significant for teachers to provide students who have difficulty in mathematics lessons to their needs and to plan teaching according to the individual needs of students (Kumaş & Ergül, 2017).

Since the associated literature is analysed, it is observed that there are studies examining the opinions of school administrators (Ayanoğlu & Gür Erdoğan, 2019; Yılmaz, 2013), special education teachers (Avcıoğlu, 2011; Çıkılı et al., 2020; Öztürk & Eratay, 2010), guidance counselors (Kuyumcu, 2011; Yazıcıoğlu, 2019) and preschool teachers (Ersan & Ata, 2016) on IEP preparation and implementation. At the same time, studies (Şahin & Gürler, 2018; Yılmaz & Batu, 2016) have examined teachers' views on the IEP preparation process. Research has examined the competencies of teachers and teacher candidates from different branches regarding IEP preparation and implementation (Camadan, 2012). There are also large-sample survey studies in which the opinions of special education teachers on the preparation and implementation of individual education

programs were taken (Akçin, 2022). Studies examining the views of classroom teachers, who play an active role in the acquisition of basic skills such as reading and mathematics and early intervention, on IEP preparation, implementation, and evaluation are limited. In previous studies (Durmuş & Ergen, 2021; Sarıgöz, 2019; Yaman, 2017), it can be stated that the opinions of primary school teachers regarding the IEP preparation and implementation process were takeninto consideration, but the IEP evaluation process was not considered. However, one of the significant situations in the IEP process is program evaluation. A qualified evaluation is required for an effective programme. In addition, studies analysing the opinions of classroom teachers on IEP preparation, implementation, and evaluation in mathematics courses are limited (Durmuş & Ergen, 2021). These studies may contribute to the IEP preparation and the implementation process, but more studies are needed to improve the process and individualize teaching.

As a result, it was seen that there were qualitative studies in which teachers' opinions on IEP preparation and implementation process were taken and quantitative and mixed studies in which teacher competencies were analysed. It was observed that the research generally focused on the IEP preparation and the implementation process, whereas studies on monitoring and evaluating the IEP process were limited. This research will contribute to the related literature by examining classroom teachers' views on IEP preparation, implementation, and evaluation in mathematics lessons in depth. Interviews with classroom teachers can contribute to the determination of the problems encountered in the process of IEP preparation, implementation, and evaluation in mathematics lessons and the preparation of action plans to overcome the problems. Eliminating the problems experienced in the IEP preparation, implementation, and evaluation process in primary school mathematics lessons may enable students to benefit from IEP activities so that they do not fall behind their peers. The results of this study may provide guidance to classroom teachers, Ministry of National Education (MoNE) officials, and researchers working on this subject.

Purpose of the Research and Research Questions

This study analyzes the opinions of classroom teachers with inclusive students regarding IEP preparation, implementation, and evaluation in mathematics lessons. In this regard, solutions to the subsequent sub-issues were pursued.

1. What are the opinions of classroom teachers about preparing IEPs in mathematics lessons?
2. What are the opinions of classroom teachers about implementing the IEP in mathematics lessons?
3. What are the opinions of classroom teachers regarding monitoring and evaluating IEP in mathematics lessons?

METHOD

This heading includes subheadings such as research model, study group, data collection tool and its development, the data collection process, analysis, validity, and reliability.

Research Design

This study, which examined the expressions of classroom teachers with inclusive students in their classrooms on IEP preparation, implementation, and evaluation in mathematics curses, was conducted with phenomenology, a qualitative study type. In qualitative research, the subject under investigation is examined systematically depending on the views and experiences of the participants (Ekiz, 2020). Phenomenology involves uncovering a phenomenon related to real life and describing experiences. In this study, the phenomenology method was used because the opinions and experiences of classroom teachers regarding IEP preparation, implementation, and evaluation in primary school mathematics courses were examined and described in depth (Yıldırım & Şimşek, 2016).

Study Group

In the study, 22 classroom teachers with inclusive students in their classrooms were selected as the study group. The research cohort comprises primary school educators employed in public schools in the provinces of Bayburt, Kahramanmaraş, and Erzincan. Criterion sampling, a purposeful sampling technique, was employed to identify the participants for the study. In this context, the presence of students with special needs in their classrooms served as the selection criterion. The demographic profiles of the study participants are outlined in Table 1.

Table 1. Overview of the Study Group's Demographic Information

Participant	Gender	Professional experience	Participant	Gender	Professional experience
CT1	Male	10	CT12	Male	8
CT2	Male	21	CT13	Female	13
CT3	Male	14	CT14	Male	21
CT4	Female	20	CT15	Female	3
CT5	Female	13	CT16	Female	12
CT6	Male	13	CT17	Male	18
CT7	Female	17	CT18	Male	7
CT8	Female	24	CT19	Female	9
CT9	Female	3	CT20	Male	12
CT10	Female	28	CT21	Female	12
CT11	Male	8	CT22	Female	9

Note= CT: Classroom Teacher

As seen in Table 1, the study group consists of 12 female and 10 male teachers whose professional experience varies between 3 and 24 years. In general, it can be stated that the professional experience of the classroom teachers participating in the study is.

Material

The research employed semi-structured interviews, observations, and document analysis as data collection methods. Initially, data collection involved the use of a semi-structured interview form, with the interview questions prepared in advance. Researchers are flexible during semi-structured interviews. This allows researchers to reorganise the questions and add new ones when necessary (Ekiz, 2020). In creating the interview questions a literature review was conducted. Based on the findings from the literature review, an 8-question semi-structured interview form was developed. To ensure the validity of the interview form in terms of content, the opinions of four different field experts from two special education and two classroom education fields were obtained. The form was then analyzed by two classroom teachers and a Turkish teacher. In line with the suggestions and criticisms from the experts and teachers, the questions in the interview form were restructured and simplified. The revised semi-structured interview form ultimately included five questions.

The question "Are there enough materials in the IEP implementation process?" was combined with the question "What are the physical arrangements in the IEP implementation process?" because it constitutes the sub-content of the question. In addition, the question "What do you do about classroom management?" was combined with the question "What kind of arrangements do you make in the teaching process in terms of individualisation of teaching?" to avoid repetition since classroom management is included in the content of the teaching process. After the arrangements, the interview questions consisted of questions such as what is considered while preparing IEP and the problems encountered, the arrangements made in the teaching process in terms of individualisation of instruction and the problems encountered, and the practices in the monitoring and evaluation process.

Second, an observationform and the document analysis method were utilised to support the interviews. The researchers created an observation form based on the codes obtained from the interviews and the literature. The observation form has three titles: IEP preparation, implementation, and evaluation. Observations were made for seven teachers randomly selected from among the participating teachers who volunteered. The first researcher made the observations during four weeks in the spring semester of 2022-2023. Within the scope of the document review, the written documents of the seven teachers who were observed within the scope of IEP preparation, implementation, and evaluation for the mathematics course were analyzed.

Data Analyses

The researchers collected the data through face-to-face interviews in November and December 2022. The data collected from the teachers were analyzed using the content analysis method. In this direction, codes were created from similar data. They were brought together within the framework of specific categories and themes, organized, and commented.

A different coder must perform the coding to minimize the researcher's effect. The similarity rate between these coders is also considered an indicator of the reliability of the research (Baltacı, 2017). In this respect, the agreement between the coders should be at least 80% (Patton, 2021). Because of the coding, it was determined that the inter-coder consensus was approximately 93%. The conflicting codes were interviewed and discussed by two researchers, and a consensus was reached. In addition, coding was performed instead of the participants' real names in the study. In the coding of the participants, the initials of the expression classroom teacher were abbreviated. Teachers were coded as CT1, CT2, ... according to the order in the table. For example, the classroom teacher ranked first in the table was coded as CT1.

Validity and Reliability

Certain steps are implemented to establish validity and dependability in qualitative research (Yıldırım & Şimşek, 2016). In this respect, methods such as participant confirmation, data triangulation, and expert opinion on the research topic were used to ensure internal validity (Creswell, 2013). Direct quotations expressing the participants' views were frequently used to ensure external validity. Again, to ensure external validity, the participant group was selected according to the purpose of the research and explained in detail. To ensure internal reliability the same questions were asked to all participants, and the answers were recorded in the same format. In addition, the information gathered through the interviews was subjected to analysis by two skilled researchers, and a comparison was conducted between their individual analyses. To ensure external reliability, the researcher retained the raw data to confirm the results obtained. To ensure reliability, codes were analysed by another researcher as stated in the title of data analysis, and inter-coder coding reliability was calculated (Guba & Lincoln, 1982).

FINDINGS

In this study, the findings were organised around three themes: opinions on IEP preparation, implementation and evaluation process in mathematics courses within the context of the research questions.

Opinions on the IEP Preparation Process in the Mathematics Course

The opinions of the classroom teachers who participated in the research on preparing IEP in mathematics lessons were presented in two categories: the issues considered and the problems experienced. In this regard, the opinions of classroom teachers on IEP preparation are given in Table 2.

Table 2. Classroom Teachers' Opinions on the Process of IEP Preparation in Mathematics Course

Categories	Codes	Participants	*f*
Considerations	Student Level	CT2, CT6, CT4, CT3, CT5, CT9, CT10, CT8, CT11, CT14, CT12, CT13, CT15, CT16, CT18, CT22, CT19, CT21, CT20	24
	Stakeholder opinions (Family, school administration, counseling service, etc.)	CT2, CT5, CT7, and CT8	5
	Practicability	CT4, CT13, CT15, CT17, CT22	5
	Observations inside the class	CT2, CT7, CT19, and CT21	4
	Disability status of the student	CT1, CT12	2
	Number of courses taken by the student	CT11	1
	Total		41
Problems Experienced	Discrepancies in CRC reports	CT2, CT3, CT5, CT9, CT11, CT12, CT20, and CT22	8
	Apathy of administration	CT10, CT11, CT12, CT16	5
	Lack of teacher competence	CT6, CT14, CT15, CT20, CT22	5
	Crowded classrooms	CT4, CT14, CT18, CT19	4
	Communication problems with the family	CT8, CT12	2
	Lack of a standard programme	CT1	1
	Total		25

Table 2 reveals that classroom teachers pay attention to the student's disability status, stakeholder opinions such as family, school administration, and guidance service, observations made in the classroom, the level of the student, the number of courses taken, and the applicability of the program. These teacher opinions on this subject are noteworthy.

"*I prepare the program according to the student's disability. I prepare the programme only if the student has a physical disability or whatever the size and type of mental disability is.*" CT1

"*I prepared a programme according to the student's situation based on the recommendations of the guidance service and me observations.*" CT2

"*I look at the student's IEP status, and accordingly, I pay special attention to him/her in the lesson, do separate writing, discuss with the family and the guidance teacher, and implement our decisions.*" CT5

"*The number of courses students take at school is also important.*" CT11

"I primarily pay attention to the readiness of the student. I observe what and how much they can do. It makes more sense for me emphasise what they can do rather than what they cannot do." CT19

"I try to ensure that it is suitable for the level of the students. In addition, I pay attention to the fact that it is useful and applicable to students." CT22

Table 2 shows that classroom teachers have different problems related to the IEP preparation process in mathematics lessons. Accordingly, it is seen that teachers experienced problems in the IEP preparation process, such as not being able to precisely determine the student's level due to incompatibility in the Counselling Research Centre (CRC) reports, not having a standard program due to the preparation of a different schedule for each student, teachers' lack of competence in this subject, overcrowded classrooms with inclusive students, problems in communication with the family, and the indifference of the administration. In this regard, the teacher opinions given below and the statement quoted from the observation form are noteworthy.

"There is no standard in preparing the IEP plan, which is completely left to the teacher's interpretation. At the same time, the prepared plans are only on paper and not put into practice." CT1

"The reports of the CRC show the student's status as lower, but the student's learning skills are sometimes higher. This situation is a problem." CT2

"The plan's applicability is difficult with a large group of students in the classroom." CT4

"Since the class size was large, the teacher had difficulty implementing the IEP she had prepared. The teacher lost his/her control over other students while teaching the student the process of addition by divisions." (Observation Form, 17.05.2023)

"Since we do not have any training on IEP preparation, we download a ready-made plan from the internet, which does not meet the child's special needs." CT6

Individualised education programmes downloaded ready-made from online environments do not consider student needs. Students may experience difficulties in the process of learning and instruction in mathematics. In this sense, the example of the plan prepared by one of the observed teachers (CT6) exemplifies this situation.

SAYILAR		- Nesneleri büyük ve küçük olma durumuna göre ayırt eder.
	Doğal Sayılar	- Nesneleri az ve çok olma durumuna göre ayırt eder. - 1'den 10'a kadar ritmik sayar. - 1'den 10'a kadar olan sayıları isimlendirir, yazar. - 1'den 20'ye kadar ritmik sayar. - 10'a kadar olan nesne içinden belirtilen kadarını seçer. - 5'ten az olan nesnelerden oluşan iki gruptaki nesneleri eşleştirir. - Sıra bildiren ilk 10 sayıyı kullanır.
ÖLÇME	Zamanı Ölçme	- Saat başlarını okur.
TOPLAMA İŞLEMİ VE TAKVİM	Doğal Sayılarla Toplama	- Toplamanın bir araya getirme, ekleme ve çoğaltma anlamlarını fark eder. - Toplamları 10'a kadar olan iki doğal sayının toplamını bulur.
ÇIKARMA İŞLEMİ VE PARALARIMIZ	Doğal Sayılarla Çıkarma	- Çıkarmanın ayırma, eksiltme ve azaltma anlamlarını fark eder.
	Paralarımız	- Paralarımızdan 1, 5, 10, Türk Liralarını tanır.
KESİRLER VE ÖLÇME	Kesirler	- Uygun şekil ve nesneleri iki eş parçaya böler ve yarımını belirtir. - Yarım ve bütün arasındaki ilişkiyi açıklar.
	Tartma	- İki nesneyi ağırlıkları yönünden karşılaştırır.

Figure 1. Sample IEP prepared for the student

"We have difficulties communicating with the family, as they usually evaluate the student in terms of grades and absenteeism; they do not participate in the meetings or leave the responsibility only to the teacher." CT8

"Problems such as the lack of interest of the school administration in the subject." CT11

Opinions on the IEP Implementation Process in the Mathematics Course

The opinions of the classroom teachers regarding the IEP implementation process in mathematics lessons were presented in four categories: physical arrangements, arrangements for classroom climate, arrangements for the teaching process, and problems encountered. Accordingly, the opinions of classroom teachers regarding the IEP implementation process are given in Table 3.

Table 3. Classroom Teachers' Opinions on the IEP Implementation Process in a Mathematics Course

Categories	Codes	Participants	*f*
Physical arrangements	Seating arrangement	CT2, CT7, CT3, CT5, CT4, CT6, CT8, CT9, CT11, CT12, CT15, CT16, CT13, CT17, CT19, CT18	17
	Developing materials suitable for learning outcomes and students	CT3, CT11, CT13, CT15, CT20, CT22	9
	Using audio and visual materials	CT3, CT4, CT15, CT16, CT17, and CT21	7
	Total		33
Arrangements for the classroom climate	Inform other students about the situation	CT2, CT4, CT5, CT9, CT13, CT16, CT15, CT18, CT19, CT20, CT21, CT22	15
	Involving parents in the process	CT4, CT5, CT8, CT15, and CT22	6
	Valuing	CT3, CT11, CT12, CT14	5
	Giving students responsibility	CT6, CT17	2
	Classroom rules	CT15	1
	Total		29
Arrangements for the teaching process	Group work	CT3, CT5, CT7, CT6, CT9, CT12, CT11, CT15, CT17, CT16, CT18, CT22, CT19	15
	Participation	CT5, CT7, CT6, CT8, CT14, and CT20	8
	Peer support	CT6, CT9, CT8, CT12, and CT22	5
	Use of ready-made activities	CT2, CT7, CT12, CT13, CT20	5
	Individual teaching	CT4, CT5, CT20, and CT22	4
	Subject repetition	CT3, CT4, and CT8	3
	Using audio and visual materials	CT5, CT17	2
	Total		42
Problems encountered	Lack of suitable and sufficient materials	CT1, CT4, CT2, CT6, CT8, CT10, CT9, CT11, CT16, CT12, CT18, CT21, CT20	16
	Lack of stakeholder interest	CT6, CT8, CT11, CT12, CT20, and CT21	9
	Crowded classrooms	CT1, CT4, CT5, CT8, CT14, and CT18	9
	Student characteristics	CT3, CT4, CT7, CT6, CT9, CT17, and CT21	8
	Lack of teacher competence	CT11, CT16, CT12	4
	Failure to implement the programme	CT1, CT8, CT22	4
	Problems arising from the system	CT1	3
	Shortage of time	CT13, CT19, CT22	3
	Expert support	CT7, CT9, CT16	3
	Discrepancies in CRC reports	CT2, CT8	2
	Having more than one inclusive student	CT10	1
	Total		62

In Table 3, the first category in which the classroom teachers' opinions on the IEP implementation process in the mathematics lesson are presented is physical arrangements. Accordingly, it was determined that the

classroom teachers made arrangements such as seating arrangement, bringing materials suitable for the acquisition and the student to the classroom, ensuring that the materials brought to the classroom were materials that concretise the subject visually and aurally, and providing peer support by having students sit together with students who can help them in every subject in the classroom. These teacher opinions on this subject are noteworthy.

"The biggest problem with my student in my class was that he could not touch someone, so I preferred to seat him in places where he could enter and exit more easily rather than in corners in the seating plan. I did not make any arrangements for the equipment because he did not need it." CT19

"I especially pay attention to the selection of colorful visual materials suitable for the level of the students, and I also make sure that the student sits close to the board to benefit from the lesson at the highest level." CT3

"I make more concrete materials ready before the lesson. I also teach my lessons in a classroom with more technological opportunities because it will appeal to more than one sense organ." CT15

"I use tools and course materials that facilitate learning and attract attention. I create and implement a seating arrangement in the classroom that will not distract them and will not affect other students. I make arrangements by considering peer teaching." CT22

Using concrete materials in mathematics teaching attracts students' attention and makes the subject comprehensible. In this regard, an example of the concrete material used by the teacher coded CT22 in the classroom is presented below (See Figure 2).

The second category in which the opinions of the classroom teachers on the IEP implementation process in the mathematics lesson are presented is the arrangements for the classroom climate. Based on the data from

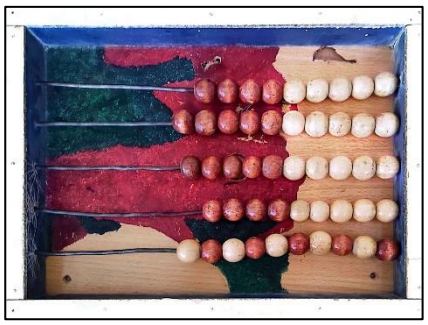

Figure 2. Example of concrete material used by a teacher in teaching rhythmic counting

the teachers, it was determined that to create a positive classroom climate, teachers informed other students about the situation of inclusive students, tried to establish classroom rules, gave responsibility to those students, valued them, provided peer support, and involved parents in the process. These teacher opinions on this subject are noteworthy.

"I do activities such as enabling students to connect with the student with special needs with examples that students can empathize with, taking measures together by explaining their characteristics and needs, setting rules, etc." CT13

"I clearly explain the rules and activities of the classroom to all children. I also provide this information to the parents in the same way. Then, I try to show fairness and continuity in the implementation. All these situations are valid for the inclusion student and their parents, so they do not have any difficulties." CT15

"I assign tasks and responsibilities to the students and try to help them adapt to the classroom climate." CT17

"Involving parents in the process and ensuring their acceptance of this situation facilitates a healthy execution of the process. However, students' acceptance of this situation facilitates practices for students with special needs. I try to raise awareness in this sense." CT22

"I act because the student is valuable." CT3

"When I seat a student with someone, I especially ensure that there are people who will not exclude them. I suggest games for them to play together outside the classroom." CT9

The third category in which the opinions of the classroom teachers about the IEP implementation process in the mathematics lesson are presented is the arrangements for the teaching process. Based on the answers given by the teachers to the research questions, it was determined that they preferred group work, individual teaching, using audio-visual materials, using ready-made activities, repeating the subject, and including inclusive students in the mathematics teaching process. The following teachers' opinions on this subject are noteworthy.

"I ensure that he/she is in group work with his/her favorite friends with whom he/she gets along well." CT21

"Sometimes, we use interactive teaching methods by forming small groups. But mostly, I try to support learning through individualised teaching." CT22

"I contribute to teaching by using smart boards andvisual and auditory objects." CT17

"We do some activities I found online that can be applied." CT2

"Unfortunately, students often hesitate to ask about subjects they do not understand. In this case, I repeat the subject more than once." CT3

The last category in which the opinions of the classroom teachers about the IEP implementation process in mathematics lessons are presented is the category of problems encountered. Accordingly, it was determined that teachers faced some problems in the IEP implementation process. Classroom teachers expressed these problems as incompatibility in CRC reports, overcrowded classrooms, lack of appropriate and sufficient materials, some characteristics of students such as absenteeism, non-compliance and shyness, lack of implementation of the program despite its preparation, lack of interest of stakeholders such as teachers, students, and parents, lack of expert support, lack of time, presence of another inclusive student in the classroom and lack of teacher competence. The following teachers' views on this issue are noteworthy.

"I act because the student is valuable." CT3

"CRC reports show the student's status as lower, but the student's learning ability is sometimes higher." CT2

"When the IEP student needs one-to-one attention, other students can be idle and make noise." CT5

"There are not enough teaching materials and no suitable classroom environment to implement the IEP plan. The high-class size makes it impossible to implement the IEP plan and causes it to remain only on paper." CT1

"The biggest problem is that parent communication is unfortunately poor, especially if the family's socioeconomic status is also poor; the family has the mentality of just letting him/her go to school, no matter what." CT8

"Unfortunately, students often hesitate to ask about subjects they do not understand. In this case, I repeat the subject more than once." CT3

"I think it would be better if we had the opportunity to prepare and consult the IEP programme with an expert opinion." CT9

"Problems arise when there is more than one in a class. Because each has different characteristics, it is at the discretion of the school administration. They should not be assigned to more than one class." CT10

"I often find it difficult to practice with other students in the class. When short-term goals are not realized, long-term goals are also interrupted. This decreases teacher motivation. To overcome all these problems, I believe that the right guidance is essential. In other words, the teacher should receive in-service training support and co-operate with special education teachers." CT12

"We cannot put the IEP plan into practice because of factors such as the structure of education, the structure of schools and classrooms, and parents' expectations. The IEP plan remains only on paper; the school administration and the Ministry of National Education watch the implementation of the IEP plan only on paper instead of creating a suitable environment for the teacher." CT1

Opinions on the IEP Monitoring and Evaluation Process in Mathematics Courses

The opinions of the classroom teachers participating in the research on the IEP monitoring and evaluation process in mathematics lessons were presented in two categories: opinions on monitoring and opinions on evaluation. Accordingly, the views of the classroom teachers regarding the IEP monitoring and evaluation process are given in Table 4.

Table 4. Classroom Teachers' Views on the IEP Monitoring and Evaluation Process in Mathematics Courses

Categories	Codes	Participants	*f*
Opinions on monitoring	Observation	CT1, CT4, CT3, CT7, CT10, CT9, CT11, CT13, CT12, CT14, CT16, CT15, CT17, CT19, CT18, CT22	20
	Involving stakeholders	CT12, CT14, CT15, CT19	7
	Scale and test application	CT8, CT12, CT15, CT20, CT22	6
	Follow-up in the support room	CT6, CT19	2
	Total		35
Opinions on the evaluation	Preparing exams suitable for the level	CT1, CT2, CT5, CT7, CT10, CT9, CT11, CT16, CT15, CT21	12
	Preparing the exam according to the plan	CT8, CT9, CT12, CT14, CT20, CT21	6
	High grading	CT16, CT17	2
	Preparing an exam according to the report	CT13	1
	Using ready-made exams	CT6	1
	Easy exam preparation	CT17	1
	Total		23

In Table 4, the first of the categories in which classroom teachers' views on the IEP monitoring and evaluation process in mathematics lessons are presented is the category of opinions on monitoring. Accordingly, it was determined that classroom teachers monitor inclusive students through observations, scales, tests, and stakeholder interviews. In addition, the teachers also mentioned that the monitoring process is followed in the support room. In this regard, these teacher opinions are noteworthy.

"I keep the activities we have done in the lesson, and I can see how much progress has been made. I can also monitor the students' progress by asking them questions verbally." CT3

"I try to follow up with observation forms, tests, follow-up charts, and returns of assignments." CT15

"I get information from family or close friends. In the application part, I deal with the student one-on-one. I evaluate according to the scale criteria I have prepared and sometimes use my initiative. I also look at the reports of the student's CRC and rehabilitation center if the student is attending. I also cooperate with the educators there." CT12

"We constantly exchange information with our support education teacher. We follow their development in this way." CT19

The second category that the classroom teachers stated about the IEP evaluation process was their opinions on evaluation. Based on the data from the teachers, it was revealed that the teachers prepared exams according to the level, plan, and report to pay attention to the students' differences. In addition, some teachers stated that they used ready-made exams without paying attention to the level of the students in the evaluation process, prepared easy exams compared to other students, and gave high grades for the students to pass.

"We prepare exams according to their level. We conduct activities to determine how much above their level at the beginning of the year." CT2

"I do the exams according to the plan." CT8

"As monitoring and evaluation, we organize ready-made exams that we download from web pages." CT6

"I prepare straightforward exams." CT17

"I evaluate inclusion students according to themselves; I give them high grades." CT16

DISCUSSION

This study examined the opinions of classroom teachers who have inclusive students regarding IEP preparation, implementation, and evaluation in mathematics lessons. The study findings were presented and discussed in line with the research questions.

The findings related to the IEP preparation process in a mathematics course determined that the classroom teachers paid attention to the student's level and the program's applicability while preparing the individualised education programme When preparing an IEP, it is necessary to clearly express the goals and the student level. However, the findings of this study indicate that classroom teachers do not focus on the purposes of the IEP preparation process in mathematics lessons. Shriner et al. (2013) examined the IEP goals

of 54 students in grades 2-8 with special educational needs and found that only 20% of the goals were sufficiently appropriate. Another study found that teachers gave less importance to goals and individualization of instruction when determining IEP goals (Hott et al., 2020). Studies analyzing IEPs prepared for students (Ruble et al., 2010) found that the goals were unmeasurable and instructional arrangements were often missing (Rashid & Wong, 2023). The findings obtained from this study are similar to those of the literature.

In the findings related to the problems encountered in the process of preparing IEP for mathematics courses, it was determined that the classroom teachers could not determine the level of the students due to the inconsistency in CRC reports, and they had difficulty in preparing the program due to the administration's lack of interest. This situation can be interpreted as classroom teachers having difficulties preparing IEPs in mathematics lessons and needing help. Studies examining the IEP preparation process found that teachers had difficulties and needed support while preparing the IEP (Durmuş & Ergen, 2021). However, some studies state that teachers cannot receive the support they need in the IEP preparation process (Akcan & İlgar, 2016; Hacısalihoğlu-Karadeniz et al., 2015). In the study conducted by Durmuş and Ergen (2021), according to the opinions of classroom teachers, it was determined that the reports prepared for students were sent late and incorrectly by the CRC. Ylmaz and Batu (2016) found that classroom teachers had difficulty determining the student level in the IEP preparation process. It can be stated that the study's findings, which examined the problems encountered in the IEP preparation process, are similar to the current research.

The findings regarding the IEP implementation process in the mathematics lesson determined that teachers made physical arrangements such as seating arrangement, acquisition, and bringing materials suitable for the student to the classroom. Considering that teaching occurs in a physical environment and is affected by the characteristics of the physical environment (Kargın, 2022), the physical environment should be suitable for the student for effective mathematics teaching. When studies on the IEP implementation process were examined, it was determined that teachers made student-appropriate changes in the seating arrangement of the students and used instructional materials (Durmuş & Ergen, 2021). The findings of this study regarding the physical agreements made during the IEP implementation process are similar to those of the existing literature. However, it can be stated that classroom teachers conducted studies on the general physical structure of the environment and the arrangement of tools and equipment as physical arrangements. Still, they were insufficient in making the classroom suitable for the student, that is, accessibility.

In the findings obtained regarding the IEP implementation process in mathematics lessons, it was found that teachers made arrangements related to classroom climate, such as informing students about inclusive students and peer support. It can be stated that classroom teachers make arrangements to create a positive classroom climate, but more arrangements are needed. In previous studies, it was emphasized that informing students with typical development about the situation of students with special needs in mathematics lessons positively affected the classroom climate (Durmuş & Ergen, 2021; Hacısalihoğlu-Karadeniz et al., 2015). In addition, classroom teachers' use of peer support in mathematics lessons positively affected the classroom climate (Everett, 2017).

This study determined that classroom teachers made instructional arrangements such as group work, individual teaching, using audio-visual materials, and group work in the process of IEP implementation in mathematics lessons. In fact, for effective teaching, different teaching methods suitable for student characteristics and subject matter should be used (Kargın, 2022). For students with special educational needs to make academic progress in mathematics, instructional arrangements such as adapting teaching methods and forming student groups are needed (Hott et al., 2020; Kargın, 2022). When the necessary instructional arrangements for the student are neglected, the student may face difficulties in further education. Studies show that teachers' instructional arrangements in mathematics lessons are limited, and the existing instructional arrangements do not consider the student's individuality (e.g., excessive time and reduced homework) (Hott et al., 2020). It has been observed that students are successful when instruction is provided by paying attention to instructional arrangements based on their individuality (Kauffman et al., 2018). The lack of instructional arrangements may be a potential reason for students' difficulties with basic mathematics skills. Studies examining instructional arrangements related to the IEP implementation process in mathematics lessons reported that teachers used concrete materials with visuality in the foreground in mathematics teaching (Çilingir & Artut, 2017). In addition, it was determined that teachers benefited from

group work in mathematics lessons in the classroom and individual instruction in mathematics lessons in the support education room (Durmuş & Ergen, 2021).

This study determined that classroom teachers experienced problems such as crowded classrooms, lack of appropriate and sufficient materials, indifference of stakeholders (teachers, students, and parents), lack of expert support, and lack of time. In studies examining the problems encountered in the IEP implementation process, teachers experienced issues such as time shortage (Durmuş & Ergen, 2021), student indifference (Gün, 2013), and avoidance of using materials (Gökmen et al., 2016). These results are consistent with the findings of the current study. Collaboration among stakeholders is important in the IEP implementation process. However, studies have found that cooperation between classroom and special education teachers is weak (Rashid & Wong, 2023; Gürgürvd., 2012). Expert support and collaboration between teachers are important for the effective continuation of the IEP implementation process. In addition, the lack of effective communication, sharing, and cooperation between the parties involved in the IEP unit causes teachers to experience difficulties in the IEP implementation process (Kozikoğlu & Albayrak, 2022). At the same time, cooperation with families in the IEP preparation and implementation process directly affects student success (Sorani-Villanueva et al., 2014).

In the findings obtained in this study regarding the IEP assessment process in the mathematics course, it was determined that the classroom teachers used ready-made exams without paying attention to the level of the students or prepared easy exams compared to other students and gave high grades for the students to pass. This situation can be interpreted as the classroom teachers could not perform the IEP evaluation process in the mathematics lesson in the desired way and could not follow the programme To determine students' individual needs in mathematics lessons and create an appropriate IEP for the student, the student's mathematics performance should be monitored using different assessment tools (Gürsel, 2017). In addition, teachers should make regular assessments to obtain feedback about the effectiveness of mathematics teaching and monitor student progress (Özdemir & Kılıç, 2023). Reviews of mathematics teaching can contribute to the identification of student deficiencies and reshaping learning. When the literature on the IEP evaluation process is examined, contradictory results are obtained. Studies examining the IEP monitoring and evaluation process in mathematics found that classroom teachers used pre-arranged evaluation tools instead of individual evaluation and generally determined student achievement verbally using the question-answer method (Durmuş & Ergen, 2021). Studies on IEP evaluation emphasized that teachers were insufficient in the evaluation process and had inadequate knowledge about criterion-based tests (Akçin, 2022; Al-Shammari & Hornby, 2019; Rashid & Wong, 2023). In contrast, in a few studies, it was determined that teachers determined student achievement according to the learning outcomes in the IEP and measured mathematics achievements with assessment forms (Güven & Gürsel, 2014). However, considering all these findings together, it can be said that classroom teachers are insufficient in the IEP monitoring and evaluation process.

Conclusions and recommendations

It was observed that the classroom teachers paid attention to the student level while preparing IEPs in mathematics lessons, but they did not consider long- and short-term goals. In addition, it was determined that classroom teachers could not obtain the school administration's support in the IEP preparation process. In line with this result, in-service training can be provided to classroom teachers about setting IEP preparation goals in mathematics courses. It was determined that classroom teachers could not determine the level of the students because of the inconsistency in the CRC reports in preparing IEP in a mathematics course, and they had difficulty preparing the program because of the administration's lack of interest.

It was determined that classroom teachers made classroom and equipment arrangements as physical arrangements for the IEP implementation process in mathematics lessons, but they were insufficient in terms of accessibility. It was observed that classroom teachers informed other students about the students' situation regarding the classroom climate during the IEP implementation process. In addition, it was observed that classroom teachers formed teaching groups for the IEP implementation process in the mathematics course, but they did not use different teaching methods. In this direction, classroom teachers can receive in-service training on the IEP implementation process in mathematics lessons. In addition, information can be shared about the different methods and techniques used in mathematics teaching.

It was determined that classroom teachers could not find appropriate and sufficient materials, stakeholders (teachers, students, and parents) were not interested, and they could not get expert support while

implementing the IEP in mathematics lessons. The instructional materials needed in the mathematics teaching process can be provided for classroom teachers to implement individualized education programs effectively and efficiently.

It was determined that classroom teachers were inadequate in IEP monitoring and evaluation in mathematics lessons and used non-standard measurement and evaluation tools. In this context, different assessment tools can be developed in the IEP monitoring and evaluation process to monitor and evaluate the program and mathematics teaching. In addition, classroom teachers can receive expert support for effective monitoring and evaluation.

Finally, it can be said that experimental studies are needed to evaluate whether the IEP preparation, implementation, and the evaluation process improves students' mathematics achievements.

Declarations

Conflict of Interest

There are no conflicts of interest in the research, writing, or publication of this study.

Ethics Approval

The Ethics Committee of Bayburt University Rectorate granted official ethical approval. We conducted the study according to the Helsinki Declaration in 1975.

Funding

This study did not receive any grant support from funding organizations in the public, commercial, or non-profit sectors.

Research and Publication Ethics Statement

The researcher obtained ethics committee approval from the Bayburt University Ethics Committee (Approval Number/ID: 26/05/2023/201-9). As authors, we assure you that the following items have been fulfilled in this study:

- This study is an original work written by the authors and has not been published elsewhere.
- The manuscript fully and accurately reflects the research and analyses conducted by the authors.
- The study results are appropriately discussed in the context of existing and previous research.
- All references used in this study are appropriately cited.

REFERENCES

Aas, H. K. (2022) Teachers talk on student needs: exploring how teacher beliefs challenge inclusive education in a Norwegian context. *International Journal of Inclusive Education*, *26*(5), 495-509. https://doi.org/10.1080/13603116.2019.1698065

Akcan, E., & İlgar, L. (2016). Investigating the adequacy of ınclusive classroom teachers about ınclusion, *HAYEF Journal of Education*, *13*(25), 27-39.

Akçin, F. N. (2022). Identification of the processes of preparing ındividualized education programs (IEP) by special education teachers, and of problems encountered therein. *Educational Research and Reviews*, *17*(1), 31-45. https://doi.org/10.5897/ERR2021.4217

Al- Shammari, Z., & Hornby, G. (2019). Special education teachers' knowledge and experience of IEP's in the education of students with special educational needs. *International Journal of Disability, Development and Education*, 1-14. https://doi.org/10.1080/1034912X.2019.1620182

Avcıoğlu, H. (2011). Opinions of classroom teachers with intellectual disabilities on preparing individualised education programme (IEP). *Ankara University Faculty of Educational Sciences Journal of Special Education*, *12*(1), 39-53. https://doi.org/10.1501/Ozlegt_0000000156

Baltacı, A. (2017). Miles-Huberman model in qualitative data analysis. *Ahi Evran University Journal of Institute of Social Sciences, 3*(1), 1-15.

Bender, W. N. (2016). *Learning disabilities: Characteristics, identification, and teaching strategies* (6th ed). Pearson/Allyn and Bacon.

Camadan, F. (2012). Determining primary school teachers' and primary school pre-service teachers' self-efficacy beliefs towards integrated education and IEP preparation. *Electronic Journal of Social Sciences*, *11*(39), 128-138.

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Çıkılı, Y., Gönen, A., Bağcı, Ö. A., & Kaynar, H. (2020). The difficulties of teachers working in the field of special education in preparing individualized education program (IEP). *OPUS International Journal of Society Researches*, *15*(1), 5121-5148. https://doi.org/10.26466/opus.659506

Çilingir, E., & Artut, P. D. (2017). The effect of realistic mathematics education on students' achievement, visual mathematics literacy and problem solving attitudes in primary school, *Marmara University Atatürk Education Faculty Journal of Educational Sciences*, 46, 1-19. https://doi.org/10.15285/maruaebd.279963

Durmuş, M. E., & Ergen, Y. (2021). Experience of primary school teachers with inclusion students in the context of teaching mathematics: A case study. *International Journal of Progressive Education*, *17*(1), 172-195. https://doi.org/10.29329/ijpe.2021.329.12

Ekiz, D. (2020). *Scientific research methods*. Anı Publishing.

Ersan, D. T., & Ata, S. (2016). Preschool teachers' opinions/views on developing the individualized education program. *Trakya University Journal of Education*, *8*(1), 162-177. https://doi.org/10.24315/trkefd.366706

Everett, D. (2017). Helping new general education teachers think about special education and how to help their students in an ınclusive class: the perspective of a secondary mathematics teacher, *International Journal of Whole Schooling*, *13*(3), 1-13.

Geary, D. C. (2011). Consequences, characteristics, and causes of mathematical learning disabilities and persistent low achievement in mathematics. *Journal of Developmental & Behavioral Pediatrics*, *32*(3), 250–263. https://doi.org/10.1097/DBP.0b013e318209edef

Gökmen, A., Budak, A., & Ertekin, E. (2016). Elementary teachers' beliefs about using manipulatives and outcome expectations in teaching mathematics. *Kastamonu Education Journal*, *24*(3), 1213-1228. https://doi.org/10.26466/opus.417200

Guba, E. G., & Lincoln, Y. S. (1982). Epistemological and methodological bases of naturalistic inquiry. *Educational Communication and Technology Journal*, *30*(4), 233-252.

Gün, Z. (2013). *The role and importance of inclusive education in mathemathics education of our country* (Thesis number. 333861). [Master's thesis, Fırat University-Elâzığ]. Council of Higher Education Thesis Centre.

Gürgür, H., Kış, A., & Akçamete, G. (2012). Examining pre-service teachers opinions about providing ındividual support services to mainstreaming students, *Elementary Education Online*, *11*(3), 689-701.

Gürsel, O. (2017). *Planning and implementing the teaching of mathematics skills and concepts to students with special needs.* Vize Publishing.

Güven, D., & Gürsel O. (2014). Teachers' opinions on the evaluation of the achievements of students with intellectual disabilities who are mainstreamed in primary education, *Elementary Education Online, 13*(1), 109-129.

Hacısalihoğlu-Karadeniz, M., Akar, Ü., & Şen, H. (2015). Reflections from the process of maths applications in inclusive education, *Journal of National Education, 45(*207), 169-188.

Hott, B. L., Morano, S., Peltier, C., Pulos, J., & Peltier, T. (2020). Are students with mathematics learning disabilities receiving FAPE?: Insights from a descriptive review of individualized education programs. *Learning Disabilities Research & Practice*, *35*(4), 170-179. https://doi.org/10.1111/ldrp.12231

Janney, R. E., & Snell, M. E. (2006). Modifying schoolwork in inclusive classrooms. *Theory Into Practice*, *45*(3), 215-223. https://www.jstor.org/stable/40071600

Kargın, T. (2022). Individualised education programme preparation and individualisation of teaching. İ. H. Diken (Ed.), *Students in need of special education and special education* (pp. 60-87) in. Pegem Academy Publishing.

Kauffman, J. M., Hallahan, D. P., Pullen, P. C., & Badar, J. (2018). *Special education: What it is and why we need it*. Milton Park, Abingdon: Routledge.

Kırcaali-İftar, G., Ergenekon, Y., & Uysal, A. (2008). Teaching addition and subtruction via constant time delay procedure to a student with intellectual disabilities, *Anadolu University Journal of Social Sciences, 8*(1), 309-320.

Kozikoğlu, İ., & Albayrak, E. N. (2022). Teachers' attitudes and the challenges they experience concerning individualized education program (IEP): A mixed method study. *Participatory Educational Research*, *9*(1), 98-115. https://doi.org/10.17275/per.22.6.9.1

Kumaş, Ö. A., & Ergül, C. (2017). Performance of students with and without learning disabilities in addition and subtraction operations, *International Online Journal of Educational Sciences, 9*(3), 1-15. https://doi.org/10.15345/iojes.2017.03.016

Kuyumcu, Z. (2011). *Teachers' problems and solution they suggest related to these problems in the process of development and implementation of individualized education plan (IEP)* (Master's thesis, Institute of Educational Sciences).

Millî Eğitim Bakanlığı [MEB]. (2018). *Mathematics curriculum.* Ministry of National Education Publications.

National Council of Teachers of Mathematics. (2000). *Principles and standards for school mathematics.* Reston, Va. NCTM.

Nunez, R., & Rosales, S. (2021). Inclusive Education: Perceptions and attitudes among Filipino high school teachers. *The Asian ESP*, *17*(6), 151-172.

Özdemir, S., & Kılıç, Y. (2023). Investigating special education teachers' views on mathematics instruction process: Sugesstions for sustainable special education in mathematics instruction. *Sustainability*, *15*(4), https://doi.org/10.3390/su15043584

Özkubat, U., & Özmen, E. R. (2018). Analysis of mathematical problem solving process of students with learning disability: Implementation of think aloud protocol. *Ankara University Faculty of Educational Sciences Journal of Special Education*, *19*(1), 155-180. https://doi.org/10.21565/ozelegitimdergisi.299494

Öztürk, C. Ç., & Eratay, E. (2010). Determining opinions of teachers of students with mental retardation attending an education application school on the individualized education program. *Abant Izzet Baysal University Journal of Faculty of Education*, *10*(2), 145-159.

Patton, M. Q. (2021). *Qualitative research and evaluation methods*. SAGE Publications Ltd.

Rashid, S. M. M., & Wong, M. T. (2023). Challenges of ımplementing the individualized education plan (IEP) for special needs children with learning disabilities: Systematic literature review (SLR). *International Journal of Learning, Teaching and Educational Research*, *22*(1), 15-34. https://doi.org/10.26803/ijlter.22.1.2

Rosenberg, M., Westling, D., & McLeskey, J. (2010). *Special education for today's teachers: An ıntroduction* (2nd edition). Pearson.

Ruble, L. A., McGrew, J., Dalrymple, N., & Jung, L. A. (2010). Examining the quality of IEPs for young children with autism. *Journal of Autism and Developmental Disorders*, *40*(12), 1459– 1470. https://doi.org/10.1007/s10803-010-1003-1

Sarıgöz, O. (2019). Primary school teachers' views on individualised education. *Journal of Turkish Studies*, *14*(6), 3459-3474. https://doi.org/10.29228/TurkishStudies.37330

Shriner, J. G., Carty, S. J., Rose, C. A., Shogren, K. A., Kim, M., & Trach, J. S. (2013). Effects of using a web-based individualized education program decision-making tutorial. *The Journal of Special Education, 47*(3), 175– 185. https://doi.org/10.1177/0022466912453940

Smith, T. E., Polloway, E. A., Patton, J. R., & Dowdy, C. A. (2011). *Teaching students with special needs in ınclusive settings* (6th edition). Pearson.

Sorani-Villanueva, S., MacMahon, S. D., Crouch, R., & Keys, C. B. (2014). School problems and solutions for students with disabilities: A qualitative examination, *Journal of Prevention&Intervention in the Community*, *42*(1), 58-71.

Special Education Services Regulation (SESR). (2018). T. C. Resmî Gazete, 30471, 7 Temmuz 2018.

Sucuoğlu, B., & Kargın, T. (2006). *Inclusion practices in primary education approaches methods techniques.* Morpa Publications.

Şahin, A., & Gürler, B. (2018). Determining the strengths of the preparation of the individual training program of teachers who are working in supporting and inclusive education. *Adiyaman University Journal of Social Sciences*, (29), 594-625. https://doi.org/10.14520/adyusbd.437206

Wei, X., Lenz, K. B., & Blackorby, J. (2012). Math growth trajectories of students with disabilities: Disability category, gender, racial, and socioeconomic status differences from ages 7 to 17. *Remedial and Special Education*, *34*(3), 154– 165. https://doi.org/10.1177/0741932512448253

Yaman, A. (2017). *Defining primary school teachers ideas upo developing and adopting individualized education programs for students who are educated in inclusive programs* (Thesis Number. 471821) [Master's thesis, Necmettin Erbakan University, Konya]. Council of Higher Education Thesis Centre.

Yazıcıoğlu, T. (2019). The opinions of guidance teachers about functioning of unit of ındividualized education program, *Journal of Social Sciences of Mus Alparslan University*, *7*(5), 223-234. https://doi.org/10.18506/anemon.520753

Yıldırım, A., & Şimşek, H. (2016). *Qualitative research methods in social sciences.* Seçkin Publishing.

Yılmaz, E., & Batu, E. S. (2016). Opinions of primary school teachers about ındividualized education programme, legal regulation and ınclusion implementation. *Ankara University Faculty of Educational Sciences Journal of Special Education*, *17*(03), 247-268. https://doi.org/10.21565/ozelegitimdergisi.267316

Yılmaz, M. F. (2013). *Investigation of the challenges primary school administrators face in the application of individualized education programs (İEP) (The case of the central districts of Gaziantep province)* (Thesis Number. 454243) [Hasan Kalyoncu University-Gaziantep]. Council of Higher Education Thesis Centre.

Yüksel, B., Oğur, Ö., & İşbilir, A. (2020). Pre-school teachers' competences in individualized education program (IEP): A mixed method study. *Asya Studies, 4*(14), 1-17. https://doi.org/10.31455/asya.779765