

A Case Study on the Development Process of Individualized Education Programs

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Abstract

This study examined how individualized education programs (IEPs) are developed in Türkiye. It explored the views of special education teachers and academics on the IEP development process and on related pre-service courses. It also compared these views with a limited classroom observation and with the quality of four teacher-developed IEPs. A holistic single-case design was used. Participants were 10 special education teachers in Isparta and 4 academics who teach undergraduate courses related to IEPs. They were selected through criterion sampling. Data came from standardized open-ended interviews, three lesson hours of observation with one teacher and document analysis. Four IEPs were scored with the IEP Quality Assessment Scale. Interview and observation data were analyzed through content analysis. Academics reported that IEP and assessment courses remain largely theoretical. They also noted the use of ready-made IEPs and weak teamwork in schools. Teachers said they valued goal setting, communication with stakeholders and family involvement. However, these reported practices were not fully reflected in the IEPs examined. IEP scores ranged from 9 to 26 out of 32. Conditions, generalization, timelines, methods and support services were often missing. In the observed lessons, the teacher also carried out the process largely alone. Within the limits of these data, this gap between reported and documented practice points to a need for more practice-based pre-service courses and on-the-job coaching for teachers.

1. Introduction

Modern social states must recognize the right to education for all citizens without discrimination (Orhan & Genç, 2016). This includes individuals with special needs. They are estimated to make up about 16% of the world's population (World Health Organization [WHO], 2022). This figure is especially important for education. Individuals with special needs require additional educational arrangements that suit their disabilities. This is where special education comes in. In short, special education aims to meet the needs that arise from a disability. In this way, it helps these individuals benefit fully from their right to education. National and international legal instruments protect the educational rights of all individuals, including those with special needs. Examples include the Universal Declaration of Human Rights, the Convention on the Rights of the Child, the Convention on the Rights of Persons with Disabilities and Decree Law No. 573 on Special Education (1997).

The right of students with special needs to education is closely linked to individualized education programs (IEPs). An IEP is a key document that secures the educational rights of a student with special needs. In Türkiye, preparing IEPs is a core duty of teachers who have students with special needs. It also requires teamwork (Avcıoğlu, 2015). However, the literature shows that teachers face various problems in preparing IEPs. This is true for special education graduates and for graduates of other programs (Akkın, 2019; Avcıoğlu, 2011; Çıkılı et al., 2020; Ersoy et al., 2021; Evyapan, 2020).

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The importance of the IEP as an educational road map is well known. Its legal basis is also clear. Even so, studies have identified limitations in how IEPs are developed and implemented (e.g., Alan, 2019; Boavida et al., 2010; Pektaş, 2008; Ruble et al., 2010). Most studies on these problems have been conducted with teachers (e.g., Çimen Öztürk & Eratay, 2010; İdin, 2016; Kol, 2016; Yılmaz & Batu, 2016). Yet teachers receive their first systematic training in IEP development during pre-service education, that is, in undergraduate programs. The views of academics who teach these courses are therefore also important. Combining the views and experiences of practicing teachers with those of academics may offer a richer and deeper perspective.

This study had three aims. The first was to explore the views of special education teachers and academics on the IEP development process and on pre-service IEP courses. The second was to describe the IEP development steps that could be observed in one teacher's practice over a limited period, as a point of comparison with the teachers' accounts. The third was to examine the quality of four IEPs developed by teachers and to compare it with what teachers reported. The study addressed the following research questions:

1. What are academics' views on the IEP development process?
2. What are special education teachers' views on the IEP development process?
3. What are special education teachers' views on their pre-service education in IEP development and assessment courses?
4. Which IEP development steps did one special education teacher follow during the observed lesson hours?
5. What is the quality of the four IEPs examined, and to what extent does it reflect the practices teachers reported?

The study contributes to the literature in three ways. First, it draws on both teachers' and academics' views to describe teachers' experiences of IEP development. Previous studies show that teachers face different problems in this process (e.g., Avcioğlu, 2011; Çimen Öztürk & Eratay, 2010; İdin, 2016; Kargın, 2007; Pektaş, 2008). Describing these problems can help to identify solutions.

Second, teachers' pre-service knowledge and skills may help to explain the problems they face in IEP development. The study therefore asked teachers about their pre-service preparation. It also examined the views of academics who teach IEP courses in pre-service programs. No study was found that examined the views of both groups together. Bringing these perspectives together may shed new light on the topic.

Third, IEPs serve as an educational road map. Students with special needs can receive a high-quality education only if their IEPs are well prepared. However, as noted above, teachers face difficulties at different steps of IEP development. Most previous studies have relied on teachers' self-reports. Comparing teachers' accounts with an observation of practice and with written IEPs may therefore show whether reported practices are reflected in the documents. Examining the quality of teacher-developed IEPs also offers insight into the current state of practice.

2. Theoretical Background

An IEP is an individualized program for a student with special needs. It is based on the student's individual needs and current level of performance. It aims to help the student acquire priority skills. The IEP plays a key role in helping students gain the skills they need most. It is also a legal document. In other words, the IEP is both an important educational guide and a legal requirement.

In Türkiye, preparing IEPs for students with disabilities became compulsory through regulations and decree laws. IEPs became mandatory with the Decree Law adopted in 1997 (Prime Ministry Administration for Persons with Disabilities, 2008). Decree Law No. 573 on Special Education (1997) is regarded as a milestone for special education in Türkiye. Article 15 states that "in special education, educational programs are implemented by considering individuals' educational

performance and by adapting the aims of the program to individuals.” The same article adds a further aim. Programs should bring students with disabilities to the same level as their typically developing peers. To do so, they should consider the students’ characteristics and competencies.

The current regulation sets out who prepares the IEP. An IEP development unit is set up in each school or institution. It is chaired by the principal or by a vice-principal appointed by the principal. The unit includes the classroom teacher, the school counselor, subject teachers, the student’s parent and the student (Ministry of National Education [MoNE], 2018, Article 47).

The IEP development process consists of 11 consecutive steps. First, information about the student is compiled. Next, the student’s level of performance is determined. Then annual goals are set. Teaching methods and materials are selected. Arrangements for the learning environment are planned. Start and end dates are set for each objective. Evaluation criteria are established. Additional services for the student are identified. Arrangements are made for the student to spend time with peers. Behavior change work is planned. Finally, transition plans are prepared.

Several studies have examined the problems teachers face in IEP development (e.g., Avcıoğlu, 2011; Çimen Öztürk & Eratay, 2010; İdin, 2016; Kargin, 2007; Pektaş, 2008). Teachers report difficulties in preparing high-quality IEPs (Alan, 2019; Boavida et al., 2010; Rakap, 2015). They also struggle to write goals with appropriate wording and in appropriate numbers (Boavida et al., 2010; Catone & Brady, 2005). Collaboration with members of the IEP team is another problem (Kol, 2016; Özan & Sarıca, 2021). Further problems arise at many other steps of IEP development (Çuhadar, 2006; Kuru Habiboğlu, 2018; Yıkılmış & Bahar, 2002).

Çimen Öztürk and Eratay (2010) highlighted several key problems. Teachers found it difficult to collaborate with the IEP team. Communication with families was weak. Teachers also had problems in assessing students and in evaluating the IEP process. Setting annual goals was a further difficulty. Teachers also differ in the formats they use. Some use MoNE’s ready-made IEP format. Others use formats they have developed themselves (Avcıoğlu, 2011; Tekin-Ersan & Ata, 2016).

Studies on the quality of teacher-developed IEPs in Türkiye show that the expected quality is not achieved (Alan, 2019; Rakap, 2015). More broadly, teachers face many difficulties in developing, implementing and evaluating IEPs (İdin, 2016).

3. Methodology

3.1. Research Design

This study used a holistic single-case design, a qualitative research approach. A case study is an empirical method. It examines a current phenomenon in depth and within its real-life context. It is used when there are multiple sources of evidence or data (Stake, 2006; Yin, 2014). Creswell (2012) notes that the “case” may be a single person, several individuals, a group, a program or an activity.

The study sought a detailed understanding of three areas. These were teachers’ pre-service courses, the in-service IEP development process and the IEPs teachers developed. A case study design was therefore appropriate. In line with the literature, the study was based on triangulation. IEP documents, special education teachers and academics were all treated as data sources. Teachers and academics were seen as program stakeholders.

Researchers classify case studies in different ways. Classifications depend on processes, purposes and the cases examined. This variety adds richness and the classifications overlap in many respects (Ozan Leymun et al., 2017). Yin (2014) describes four types: holistic single-case, embedded single-case, holistic multiple-case and embedded multiple-case designs. This study used a holistic single-case design for two reasons. First, the unit of analysis was not individual students or teachers. It was the IEP development process itself. This process was carried out in one province, under the same legislation and with the same official format. Second, teacher and academic views, observations and IEP documents were treated as data sources. Each shed light on a different aspect of this single process. The aim was not to divide the case into sub-units for separate analysis. The academics

worked at universities in other provinces. They were not treated as a direct part of the case. Instead, they served as a contextual data source. Their views shed light on teachers' pre-service preparation and on the undergraduate education behind the IEP process.

The research process followed the eight steps recommended by Yıldırım and Şimşek (2006) for case studies. These steps were grouped into three stages. The first stage involved defining and designing the study based on the literature. The second stage covered identifying data sources, collecting data and analyzing data. The final stage involved writing up the findings, conclusions and recommendations in a research report.

3.2. The Case

The case in this study was the IEP development process as carried out by special education teachers in the city center of Isparta, Türkiye. This process takes place within the legal framework and the 11-step procedure described in the Theoretical Background.

3.3. Participants

The study was conducted in the city center of Isparta in the autumn term of the 2022–2023 academic year. Ten teachers and four academics took part voluntarily. Participants were selected through criterion sampling, a type of purposive sampling. In criterion sampling, all cases that meet a set of predetermined criteria are studied. The researcher sets the criteria. The units may be people, events, objects or situations with certain characteristics (Marshall & Rossman, 2014; Yıldırım & Şimşek, 2006).

Teachers were selected on four criteria. They had to (a) be graduates of a special education department; (b) work as special education teachers in MoNE special education schools (for autism spectrum disorder or intellectual disability) or in special education classes in mainstream schools; (c) be responsible for developing IEPs and have at least five years of experience; and (d) volunteer to participate. Table 1 presents information on the teachers.

Table 1

Demographic Information on the Teachers

Code	Gender	Department of graduation	Experience	Institutions worked in
T1	Male	Intellectual disabilities	11	Special education practice school Special education class Special education vocational school
T2	Male	Intellectual disabilities	11	Special education class Special education vocational school
T3	Female	Intellectual disabilities	18	Special education and rehabilitation center Special education practice center
T4	Male	Intellectual disabilities	11	Special education class
T5	Male	Intellectual disabilities	8	Special education class Special education practice school Guidance and research center
T6	Male	Intellectual disabilities	9	Special education and rehabilitation center Special education class
T7	Female	Intellectual disabilities	17	Special education practice school Guidance and research center Special education kindergarten
T8	Male	Hearing impairments	11	Special education and rehabilitation center Special education class Special education practice center
T9	Female	Intellectual disabilities	14	Special education practice school Special education vocational school Special education class
T10	Male	Intellectual disabilities	18	Special education and rehabilitation center Special education practice center

As Table 1 shows, seven teachers were male and three were female. Nine had graduated from programs in teaching students with intellectual disabilities. One had graduated from a program in teaching students with hearing impairments. Their experience ranged from 8 to 18 years. They had worked in a range of settings. These included special education classes, special education kindergartens, special education practice schools, special education vocational schools and special education and rehabilitation centers.

Academics were also selected on four criteria. They had to (a) conduct academic work in a special education department; (b) hold at least a doctoral degree; (c) teach, or have taught, IEP-related and teaching practicum courses in special education teacher education programs; and (d) volunteer to participate. Table 2 presents information on the academics.

Table 2

Demographic Information on the Academics

Code	Gender	Academic title	Experience	Courses taught
A1	Male	Associate Professor	25	Preparing Individualized Education and Transition Plans Assessment in Special Education Teaching Practicum
A2	Female	Associate Professor	25	Preparing Individualized Education and Transition Plans Assessment in Special Education Teaching Practicum
A3	Female	Assistant Professor	12	Preparing Individualized Education and Transition Plans Assessment in Special Education Teaching Practicum
A4	Female	Assistant Professor	10	Preparing Individualized Education and Transition Plans Teaching Practicum

As Table 2 shows, three academics were female and one was male. Two were assistant professors and two were associate professors. Their experience ranged from 10 to 25 years. All of them taught IEP-related and teaching practicum courses in special education teacher education programs.

3.4. Researcher's Role

The researcher graduated from a special education department at a Turkish university in 2011. The researcher has 11 years of experience in different settings. These include special education classes, a special education practice school and a guidance and research center. The researcher began a master's degree in special education in 2012. This was interrupted by an inter-provincial reassignment. In 2019, the researcher began a master's degree in curriculum and instruction. The coursework has been completed, and the thesis is in progress. The researcher also works as a special education teacher at a lower secondary school in the city center of Isparta.

As a colleague working in the same province, the researcher took part in the study as an insider. During classroom observations, the researcher acted as a non-participant observer. This role offered several advantages. It allowed rich and detailed data collection, a climate of trust, access to documents and the benefits of professional experience (Bogdan & Biklen, 2003). However, the insider position may also be a source of bias. Participants may be more inclined to present themselves positively to a colleague. The researcher's own IEP experience may also influence the interpretation of data. Several steps were taken to reduce this risk. Leading questions were avoided in interviews. A second coder took part in the coding process. Findings were submitted for member checking. Teachers' accounts were compared with observation and document data.

3.5. Data Collection Tools

Interviews, observation and document analysis were used to answer the research questions. The instruments were two interview forms, an observation form and the IEP Quality Assessment Scale.

3.5.1. Standardized Open-Ended Interview Forms

Teachers' and academics' views were collected with standardized open-ended interview forms. The interviews addressed the IEP development process and pre-service education in IEP development and assessment courses. Interviews lasted 10–16 minutes on average. All interviews were audio-recorded.

The study adopted the standardized open-ended interview approach in Patton's (1987) classification. In this approach, a set of questions follows a fixed order. Each interviewee is asked the same questions in the same order and manner (Patton, 1987). This approach was chosen because the interviews focused on the IEP development process, which follows a systematic sequence. Two separate forms were prepared, one for teachers and one for academics.

Teacher interview form. Standardized open-ended interviews were held with 10 special education teachers. They worked in MoNE special education schools or special education classes in Isparta. The aim was to identify their views on the IEP development process and on pre-service education in IEP development and assessment courses.

A draft form was prepared based on the relevant literature. The course contents published by the Council of Higher Education (CoHE, 2022) were also reviewed. These covered two courses: Preparing Individualized Education and Transition Plans, and Assessment in Special Education.

The draft form contained six questions. Certain principles should be followed when writing interview questions (Yıldırım & Şimşek, 2006). Care was therefore taken to write clear, open-ended questions and to order them systematically. Alternative questions and probes were also included. These helped when participants did not fully understand a question. They also enriched the data.

Four experts reviewed the form for validity. Two held doctorates in special education. The other two held doctorates in curriculum and instruction and had experience in qualitative research. The usability of the questions was also tested in pilot interviews with two teachers who were not participants. The pilot interviews were informal, face to face and conversational. No questions were removed after the pilot interviews and expert reviews. The fourth question was revised. Potentially leading wording was changed on the advice of more than one expert. New probes were added in line with expert suggestions. The form was finalized after these revisions.

Academic interview form. Standardized open-ended interviews were held with academics in special education departments at universities in various provinces of Türkiye. They taught, or had taught, IEP-related courses or teaching practicum courses. The aim was to identify their views on the IEP development process.

The academic form was developed through the same process as the teacher form. This included reviewing the literature and CoHE course contents and preparing a six-question draft.

The same four experts reviewed this form. Its usability was tested in a pilot interview with one academic who was not a participant. This pilot interview was conducted by telephone in a conversational style. Several revisions were made based on the pilot and the expert reviews. Potentially leading wording was clarified using the experts' suggestions. New probes were added. A few poorly worded sentences were rephrased. The form was finalized after these revisions.

3.5.2. Observation Form

Observation was used to describe the IEP development steps followed by a teacher in practice and the decisions made at each step. It was intended as a point of comparison with the teachers' interview accounts rather than as a basis for generalization. Observations were conducted with one special education teacher (referred to as Teacher A) who agreed to be observed. They covered three lesson

hours on three different days (21 September, 28 September and 5 October 2022). These took place at the start of the school year, when teachers reported carrying out initial assessments and setting goals.

In qualitative research, observation data describe the event observed, the activities within it and the people involved. They also describe what is observed from the participants' perspectives (Patton, 2002/2014). In other words, observation is a method for describing in detail the behavior that occurs in a setting or institution (Yıldırım & Şimşek, 2006). A structured or semi-structured field observation was used to describe the steps teachers follow in IEP development. This type of observation usually relies on a structured observation tool. The researcher therefore developed an observation form based on the 11 steps of the IEP development process. The form also included a section for researcher notes. This allowed the researcher to record thoughts during observation without mixing them with the data.

Two experts reviewed the form for validity during its design. Both held doctorates in curriculum and instruction and had experience in qualitative research. The form was finalized based on their feedback.

3.5.3. Document Analysis

In qualitative research, document analysis offers a view of what happens behind the scenes of a program that cannot be observed directly (Patton, 2002/2014). Four IEPs developed by four teachers who volunteered to share them were therefore used as a data source. Including these IEPs aimed to strengthen validity and to draw on different data sources. The IEPs were examined through document analysis. Their quality was assessed with the IEP Quality Assessment Scale.

3.5.4. IEP Quality Assessment Scale

The quality of the IEPs was assessed with the IEP Quality Assessment Scale (IEP-QAS) developed by Alan (2019). The IEP-QAS is a rubric with both analytic and holistic features. Factor analysis yielded 16 items and two subscales: the Instructional Components Subscale and the Complementary Components Subscale. Each subscale has eight items. Each item is scored 0, 1 or 2. Total scores range from 0 to 32. Reliability was examined with Cronbach's alpha, which was .80 for the 16-item scale. The two subscales correlated with the total scale at .89 and .71, respectively.

3.6. Trustworthiness

Different strategies have been proposed to ensure validity and reliability in qualitative research. This study used the framework that Erlandson et al. (1993, as cited in Yıldırım & Şimşek, 2006) developed from the work of Lincoln and Guba (1985). Table 3 summarizes the measures taken.

Table 3

Measures Taken to Ensure Validity and Reliability

Criterion	Conventional term	Naturalistic term	Methods used
Accurate representation of reality through the findings	Internal validity	Credibility	Prolonged engagement Triangulation Expert review Member checking
Applicability of the findings	External validity	Transferability	Thick description Purposive sampling
Ensuring consistency	Internal reliability	Dependability	Dependability audit

Note. Adapted from Yıldırım and Şimşek (2006).

Four strategies were used to enhance credibility. First, the researcher's 11 years of field experience helped in understanding the context. Observations were conducted on three different days. However, total observation time was limited to three lesson hours. Prolonged engagement was therefore only partly achieved. Second, data source triangulation (teachers, academics and four IEPs) and method triangulation (interviews, observation and document analysis) were used (Patton, 2002/2014). Third, the researcher reviewed all stages of the study with the thesis supervisor at least twice a month. The

data collection tools were also revised based on the views of four experts. Finally, interview findings were summarized in a report and emailed to participants. Participants then confirmed them verbally (Yıldırım & Şimşek, 2006).

For transferability, findings were organized by codes and themes. They were described in detail with direct quotations. Participants were selected through criterion sampling (Yıldırım & Şimşek, 2006).

For dependability, the interview data were coded independently by the researcher and by an expert. The expert had experience in qualitative research in curriculum and instruction. Agreement was calculated with the formula of Miles and Huberman (1994, p. 64): $\text{agreement} / (\text{agreement} + \text{disagreement})$. Agreement for the interview data was 81%. The four IEPs were scored with the IEP-QAS by the researcher and two experts. One expert was a special education teacher with expertise in curriculum and instruction. The other was an academic with a doctorate in special education. Inter-rater agreement was 93.75% for the first and fourth IEPs, 100% for the second and 87.5% for the third.

3.7. Data Analysis

Interview data were analyzed with content analysis, a qualitative analysis method. Yıldırım and Şimşek (2006) describe the basic aim of content analysis as reaching concepts and relationships that can explain the data. Interview data were transcribed and analyzed in seven steps:

1. The researcher transferred the audio recordings to a computer without any editing.
2. The researcher transcribed each interview in a separate file.
3. The researcher and an independent listener checked the transcripts against the recordings for accuracy.
4. The researcher imported the transcripts into MAXQDA 2020 to ensure a systematic and triangulated analysis.
5. The researcher created codes and themes in MAXQDA for the data from each interview question.
6. The researcher visualized the codes and themes and explained the findings.
7. The researcher included direct quotations from participants under each finding. This aimed to explain the findings, make them easier to understand and support their validity and reliability.

Observation data were also analyzed with MAXQDA. The observation form was first transferred to the computer. The data were then analyzed with the predetermined codes.

The frequencies (f) reported next to codes show the number of coded segments assigned to each code. A participant could contribute more than one segment to the same code. Frequencies therefore reflect the density of a code in the data set, not the number of participants. IEP-QAS scores are presented descriptively.

4. Results

4.1. Academics' Views on the IEP Development Process

Academics' views on the IEP development process were grouped under three themes: “undergraduate program”, “problems” and “suggestions” (Figure 1).

Findings for the “undergraduate program” theme were grouped under four codes: “lack of practice in courses” ($f = 19$), “undergraduate IEP and assessment courses” ($f = 19$), “differences in the teaching and learning process” ($f = 12$) and “teaching practicum” ($f = 10$).

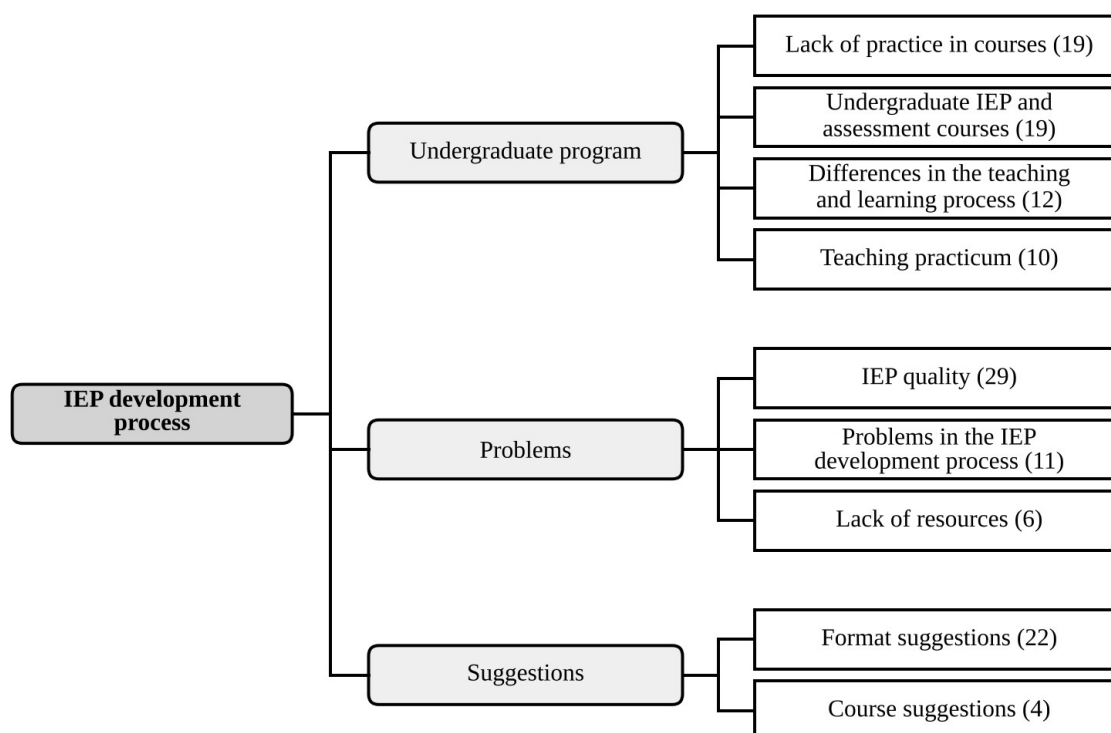
Regarding “lack of practice in courses”, academics felt that undergraduate IEP and assessment courses lacked practice. They argued that practical courses should be added to theoretical ones. The following views illustrate this:

[Courses taken at undergraduate level] When something learned in theory is applied two or three years later in the teaching practicum, there will of course be gaps, errors or missed points. That is why I think the IEP course should run like a laboratory course: one lesson of theory followed immediately by one lesson of practice. (A4)

The most basic problem is this. We assume that undergraduates have learned certain theoretical knowledge by the time they graduate. But they have serious limitations in turning this knowledge into practice, whether in assessment or in preparing and developing IEPs. (A1)

Figure 1

Academics' Views on the IEP Development Process



Regarding “undergraduate IEP and assessment courses”, academics stated that undergraduates may have gaps in assessment. They gave several reasons. Undergraduate programs do not cover the different types of assessment. Courses focus mainly on theory. Theory is not fully put into practice. One academic said:

In the Assessment in Special Education course, we always teach mainly informal assessment. Students think this [informal assessment] is the only way. But our students always lack knowledge of standardized tests and how to use them. I honestly think students should also learn to use these standardized tests and batteries. In this sense, students are not fully trained. (A3)

Regarding “differences in the teaching and learning process” ($f = 12$), academics stated that course contents are common across universities. However, universities view the IEP differently. As a result, the teaching and learning process differs. One academic said:

[Course content] Although the content is common, we know that these courses are taught differently in every special education department in Türkiye. With CoHE’s recent changes, departments were given freedom in creating course contents and naming courses. Special education departments say they are only now starting to make their programs independent. So there are such initiatives, but they have not yet moved far from the old program. (A1)

Regarding “teaching practicum” ($f = 10$), academics stated that undergraduates may take ready-made goals. They may also make errors when selecting goals. Academics described how they try to correct these errors in IEPs written during the practicum. They also noted that students struggle to transfer the theory from courses into practice. Some views were as follows:

“... Students of course remember some very basic parts of the theory they learned in that course. But they make many errors, for example in writing goals and goal statements” (A4).

I make a point of having them write the IEP by hand. Why? Why do I choose this way? I accept that technology exists to make life easier. But I have seen this. Some IEPs arrive that start with Azra and end with Hasan. So they take half from one place and half from another. Job done, as they say. No, that is not it. So I find it best to make them write by hand, so that they learn by writing. I think students get quite annoyed with me about this, to be honest. They complain to my face, but there is no gain without pain. (A3)

Findings for the “problems” theme were grouped under three codes: “IEP quality” ($f = 29$), “problems in the IEP development process” ($f = 11$) and “lack of resources” ($f = 6$).

Regarding “IEP quality” ($f = 29$), academics stated that graduates use ready-made IEPs from the internet once they start teaching. They also keep using the same IEPs for long periods. In addition, IEPs are developed without the IEP team meeting or even being formed. Some views were as follows:

An IEP should be prepared according to the student’s performance. It is very sad that a computer program does it instead. A second issue is that some teachers use an IEP prepared in one year for three or four years. Look, these things are very wrong. We say they should not happen. But unfortunately they do. We say that teams should prepare IEPs. Unfortunately, many teachers working for the Ministry take the easy way out. Rather than using this knowledge, they ask how to get the job done easily and how to meet the procedure. I honestly think they get by with ready-made IEPs. (A3)

We also did an IEP study in the field, in special education schools. For example, even in the middle of the term, some students still had no IEP. Most of these teachers were special education graduates, my students or my colleagues’ students. Or the IEPs prepared... there are IEP generators online. Ready-made target behaviors are pulled from there and downloaded. Unfortunately, this applies to special education teachers and to teachers from other fields. Teachers’ attitude to the IEP is this: let us prepare a legal document so that it is ready when the inspector comes. (A1)

Regarding “problems in the IEP development process” ($f = 11$), academics stated that parents cannot fully take part in IEP development. Undergraduates want to see previously developed IEPs before writing a new one. They also cannot fully assess students with special needs in practicum settings. Some views were as follows:

Let me put it this way. Students generally have one problem: they always want to see a sample IEP. They find a sample and model it, or they make small changes to it. But the main thing on their minds is always the format. What will the IEP form look like? What information comes in what order? What will the table look like? They always get stuck on that. When preparing IEPs, they model the IEPs that other students prepared in previous years. They look at them and try to copy them. What happens then? Whatever error the first person made in previous years keeps being carried forward. (A1)

It is not easy, I accept that. Getting the family to school is very hard. Planning a meeting with the family is very hard, and so on. I accept all of this, but there is no gain without pain. We have to put up with these difficulties. (A3)

“Even a look at the IEP format shows that assessments, especially detailed assessments, are done quickly, like homework, just to get them over with. They are not really detailed” (A4).

Regarding “lack of resources” ($f = 6$), academics stated that undergraduate resources on assessment methods are inadequate. They called for more research and resources on assessment. Some views were as follows:

There is a problem in the Assessment in Special Education course. First of all, resources for the course are very limited. There are very few academic publications in Turkish on assessment in

special education. ... We see that assessment research in special education in Türkiye is still at the first stage, that is, descriptive studies. There are very few practice-oriented studies that aim to bring about change. (A1)

I look at IEP books. The long-term goals in IEP books are not appropriate. Some IEP books are very utopian. For example, they say the child's strengths and weaknesses should be written. But strengths relative to what? There are such abstract points in the literature too. So there is a need for more functional IEP books. (A3)

Findings for the “suggestions” theme were grouped under two codes: “format suggestions” ($f = 22$) and “course suggestions” ($f = 4$).

Regarding “format suggestions”, academics made several points. Universities should teach the IEP course with a shared understanding. Undergraduates should put their theoretical IEP knowledge into practice. The IEP form provided by MoNE is incomplete and inadequate. Interdisciplinary sections should be added to it. Some views were as follows:

“In our country, rehabilitation centers are a reality. This cannot be denied. To resolve this multiplicity of actors, the teacher at the rehabilitation center must be added through legislation, and a single IEP must be prepared” (A3).

[The MoNE IEP format] It is neither adequate nor appropriate. It definitely needs to be developed and transformed. In fact, I think MoNE should not provide an IEP format at all. What happens now is that people fill in the template just to fit it. Instead of a format, MoNE could publish a declaration of general principles [a statement of general IEP principles] that shows what is essential. It could publish a handbook that explains how to write and build each part. I think that would be much more useful. (A1)

The identification card should be expanded, like a more detailed family interview form that helps us get to know the family. For example, we now have refugee students, refugee students with disabilities. There may be cultural differences. The card should include detailed information on the disability and on the support the student receives. If needed, the views of the professionals who provide that support, such as a physiotherapist or speech therapist [other professionals serving the student], should be added. I think this is very important. (A2)

Regarding “course suggestions” ($f = 4$), academics mainly argued that IEP and assessment courses should be largely practice-based. One academic said:

[IEP and assessment courses] Let me say this about both in general. They need to move from theory to practice. There are core courses in special education, such as assessment, IEP, behavior modification and teaching methods. In all of these, undergraduates must be trained through more direct practice with real cases and through supervision [mentoring]. Perhaps plenty of appropriate, accurate and well-prepared sample IEPs could be provided for students to work on. I think this is the only way to overcome the problem. (A1)

4.2. Special Education Teachers' Views on the IEP Development Process

Teachers' views on the IEP development process were grouped under five themes: “goal-setting process”, “communication with stakeholders”, “IEP evaluation”, “initial meeting with the family” and “performance determination” (Figure 2).

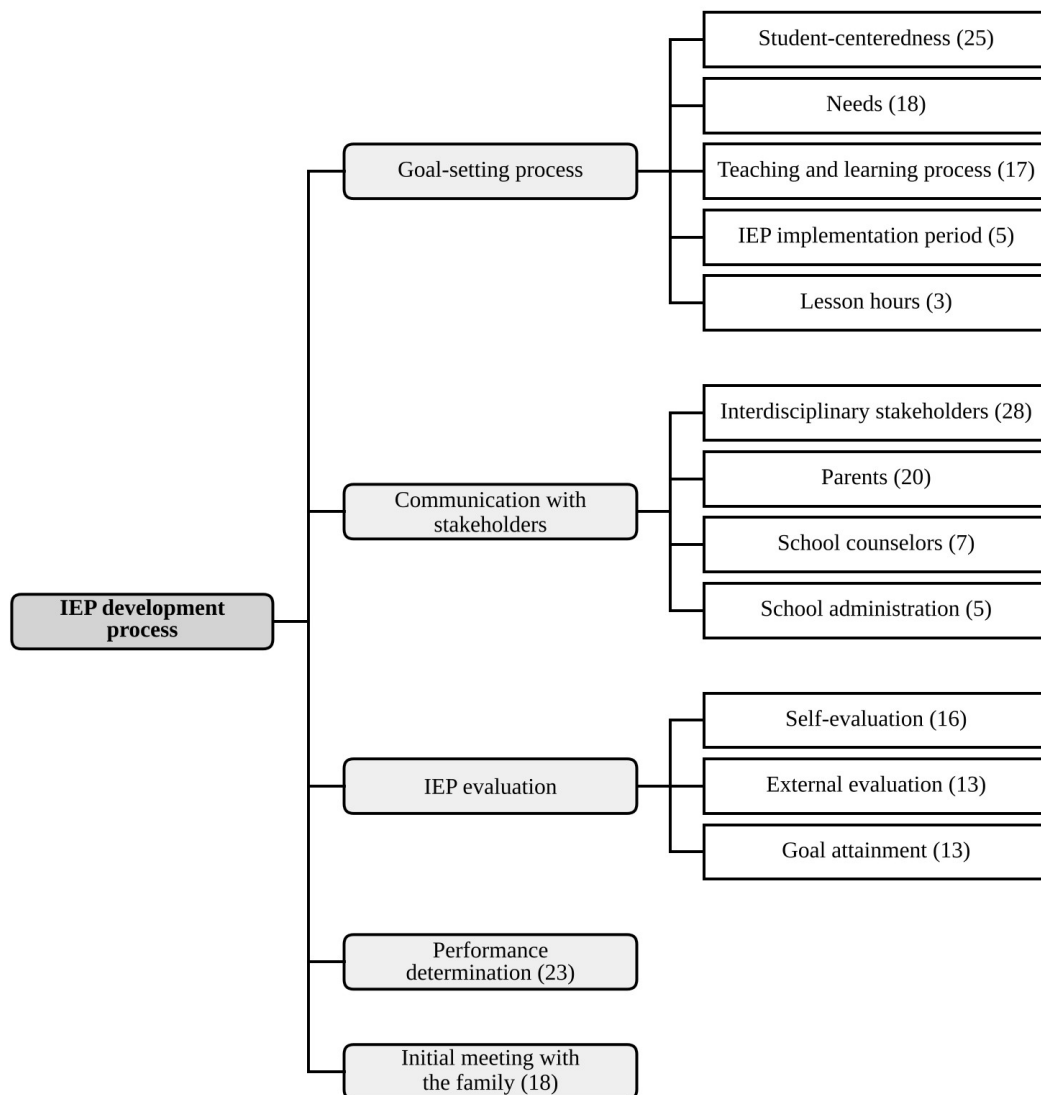
The most frequently coded theme was “goal-setting process” ($f = 68$). This was followed by “communication with stakeholders” ($f = 60$) and “IEP evaluation” ($f = 42$). Next came “performance determination” ($f = 23$) and “initial meeting with the family” ($f = 18$).

Teachers considered five aspects in the goal-setting process: “student-centeredness” ($f = 25$), “needs” ($f = 18$), “teaching and learning process” ($f = 17$), “IEP implementation period” ($f = 5$) and “lesson hours” ($f = 3$). Regarding “student-centeredness”, teachers said that the student was their priority. They considered the student's social, physical and other needs. They also considered the student's learning pace, skills, strengths and weaknesses. One teacher said:

What are the student's strengths? What are the weaknesses? There is sometimes a misconception that the IEP should focus only on the student's deficits. But I try to focus both on the student's strengths and on the areas where the student needs support. (T4)

Figure 2

Special Education Teachers' Views on the IEP Development Process



Regarding “needs”, teachers described an observation period of two to four weeks. It starts at the beginning of the term or when the student joins the class. Its purpose is to get to know the student and to determine the student’s educational performance. Teachers use observation forms and general assessment forms that they prepare themselves or that are ready-made. After this period, teachers work with families to identify the student’s most important needs. They also identify the areas in which the student should receive education first. Some views were as follows:

“We do an observation period of about two weeks with our student” (T5).

First, to get to know the student, if the student is new, or of course if I have just taken over the class, there is a one-week observation period. We have general assessment forms. We fill them in by observing the child and doing activities together. (T9)

Regarding “teaching and learning process” within the goal-setting theme, teachers mainly referred to student needs when setting long-term and short-term goals. They also considered which needs should be addressed first. In addition, they considered how long they would work on each goal and which methods and techniques they would use. They thought about how to arrange the learning environment.

They also planned in-class and out-of-class activities and measures to reduce behavior problems. One teacher said:

When preparing the long-term goal, we first determine the student's performance. We then set the main goal based on where the student has gaps. With short-term objectives, we set the sub-steps, that is, the sub-goals that will help the student reach this goal. (T6)

Regarding "IEP implementation period", teachers said that their IEPs cover half a term rather than a full year. They gave several reasons. Goals may become scattered over a full year. A shorter period makes it easier to check whether the student has achieved the goals. It also avoids serious loss of time after this evaluation. One teacher said:

I generally set long-term goals to cover half a term. When we set them for a full year, the focus gets scattered, in my view. It is also hard to tie things together. So I stick to half a term. (T1)

Regarding "lesson hours", teachers said they may adjust the time allocated to long-term and short-term goals according to the lesson hours set by MoNE. Some views were as follows:

"We set the long-term and short-term goals. We decide on suitable, how should I put it, materials. Then there is the implementation stage of the IEP. In the learning environment, the staff and these durations are set" (T2).

"But generally, of course, it also depends on the lesson hours" (T1).

Four codes emerged under "communication with stakeholders": "interdisciplinary stakeholders" ($f = 28$), "parents" ($f = 20$), "school counselors" ($f = 7$) and "school administration" ($f = 5$).

Regarding "interdisciplinary stakeholders", teachers described a wide range of stakeholders in schools and classrooms. These included the school administration, the school counselor, the family and subject teachers. Where two teachers share a class, the co-teacher is also a stakeholder. Teachers added that they form an IEP committee with these stakeholders at school. They also contact professionals from other disciplines, such as physiotherapists and child psychiatrists. In addition, they work with institutions such as the Guidance and Research Center (RAM). Some views were as follows:

Communication is very important here in special education. I think it would be more effective to create an IEP process that brings everything together through inter-institutional cooperation: the performance chart from the doctor, the target outcomes from the RAM, the input from the family and the goals set by the teacher. (T8)

For our students with physical disabilities, if they work with a physiotherapist, we always contact the physiotherapist about gross motor or fine motor skills. We try to add what we can do to the IEP. After that, we can always exchange views with the child psychiatrist the child attends. (T10)

Regarding "parents", teachers said that parents are the most important and largest stakeholder group. They meet parents first to discuss the student. Based on these meetings, they decide what the student can also work on at home. Some views were as follows:

When I first came to, my first step was entirely meeting families. Beyond that, the family is important to me. It is very important for special education anyway. I try as much as possible not to leave the family out. I try to set up weekly meetings... When we prepare the IEP, we sometimes cannot involve the family. We need to create a format that lets us follow family communication more effectively. (T8)

"Well, we see the student for a certain time. But the family is always with the child. We decide which goals are the child's priorities by sharing them and talking with the family" (T5).

Regarding "school counselors", teachers said that counselors are usually involved in IEP development. Counselors can provide psychological support to parents of students with special needs. Some views were as follows:

“We already get effective support from the counseling service. Mothers in particular have emotionally intense relationships with their children, so they sometimes lose their resilience. I get support especially at those points” (T8).

“They help us if the child has a psychological need rather than an educational one, or if there is a family-related issue” (T1).

T1 also drew attention to the limited role of counselors with the words “counselors only if needed”.

Regarding “school administration”, some teachers saw the administration as an important stakeholder. Others did not see it as a stakeholder at all. Some views were as follows:

“First the administration, and in our vocational schools especially our field teachers and subject teachers” (T2).

“I also meet the school administration” (T4).

“School administrations are generally not very involved in these matters. So we do not really count them as stakeholders. They just read and sign” (T1).

Three codes emerged under “IEP evaluation”: “self-evaluation” ($f = 16$), “external evaluation” ($f = 13$) and “goal attainment” ($f = 13$).

Regarding “self-evaluation”, teachers said they evaluate IEPs with forms that they prepare or that MoNE provides. They noted that there are various criteria for evaluating IEP goals. Goal outcomes were the most important criterion for them. Some views were as follows:

“I evaluate myself whether I have reached the goals I set for the student in the IEP process, using criterion-referenced tools. That is, I use informal assessment tools” (T4).

“I prepare my own evaluation form that includes all the goals I have put in the IEP” (T9).

Regarding “external evaluation”, teachers put the family at the center of IEP evaluation. They check whether the family continues to work on the long-term and short-term goals at home. They also keep in touch with other stakeholders. They check whether the student’s performance is improving and update the goals as needed. One teacher said:

... but more than that, I think the parent’s view is our main criterion. If the parent followed the program we set, supported our plan and was involved, and if we achieved consistency, then the parent’s evaluation matters more to me than the others. (T1)

Regarding “goal attainment”, teachers evaluate IEP goals at the end of each term. They look at how independent the student has become. They also look at how well the student uses the acquired skills in daily life. Teachers said they do not always fully reach their goals, for various reasons. Sometimes they make errors in selecting goals. Some views were as follows:

... so can we reach them? I cannot say I reach them one hundred percent. In none of my years have I reached my goals one hundred percent... What is the real-life applicability of this feedback? This is the most important criterion for us. (T5)

Sometimes we make mistakes. We include work in the IEP because we think the student can work on it. But the student’s performance may not develop as we expected over the year. So we cannot work on everything we put in the IEP. (T7)

... even if the child has not become independent, say, if the child has moved from physical prompting to verbal prompting, I record this in the individualized teaching plan. For example: at the beginning of the year, the child did it with physical prompting. By June, the child had moved to verbal prompting. (T3)

Regarding “performance determination” ($f = 23$), teachers said they first look at all developmental areas. They identify what the student can and cannot do. They record this with general assessment forms, observation forms and similar tools, either self-made or ready-made. They also described how they arrange the environment and how they determine the student’s performance. In addition, they

collect information on the student's illnesses and medications. They also ask about other important issues in the student's life, such as domestic violence, divorce or bereavement. Some views were as follows:

"First we look at the developmental areas. What can the student do? What can we work on with this student? What can we teach? We try to identify these" (T7).

Especially in performance determination, general assessment and reinforcement are not really used; it has become a habit. As a teacher, I do the general assessment right away. I pay attention to key points, such as keeping the child away from distractions. Depending on the child, the child's back may need to face the door or the window. After that, we start determining performance. Yes, environmental arrangement comes even before the analysis. Once the environment is arranged, we bring the child in. Then we do the skill analysis and determine performance. We draw up the education plan based on the performance from this skill analysis. That's it. (T3)

I meet the student's previous teachers, classroom teachers and subject teachers. If the student comes from another school, I contact the teachers by email or social media. I also meet the student's teacher at the special education and rehabilitation center. I collect information about the child and discuss the child's performance. I gather information from these sources on illnesses, additional disabilities, medications and anything else I should know about the child. (T4)

Regarding "initial meeting with the family" ($f = 18$), teachers said that the first meeting with the family is very important. It takes place at the start of the school year, when the student first joins the class. This meeting allows teachers to get to know the family and gather in-depth information about the student. It also helps to identify the family's priorities. Teachers also described how the family contributes to IEP development after performance determination. Some views were as follows:

"When we first meet the student, or rather when we first meet in the classroom, I first ask for a meeting with the parents, to be honest" (T1).

"My first two weeks are spent mainly on family meetings. The child's world is the home, so performance at home is more decisive for me" (T8).

4.3. Special Education Teachers' Views on Pre-Service IEP Development and Assessment Courses

Teachers' views on pre-service education were grouped under five themes and four codes (Figure 3). The themes were "theoretical or practical nature of courses", "teaching and learning process", "use of undergraduate courses in professional life", "self-evaluation" and "retention".

Teachers focused most on the "theoretical or practical nature of courses" ($f = 32$). This was followed by the "teaching and learning process" ($f = 30$) and the "use of undergraduate courses in professional life" ($f = 22$). Next came "self-evaluation" ($f = 13$) and "retention" ($f = 3$).

Two codes emerged under the "theoretical or practical nature of courses": "theoretical nature of courses" ($f = 25$) and "use of theoretical knowledge in teaching practice" ($f = 7$). Regarding the first code, teachers stressed that the courses were based on theory. Theory supported them in developing IEPs. However, their IEP skills developed mainly over time and in the workplace after graduation. Some views were as follows:

"No matter how much theory you receive, the first years, especially the first job after graduation, determine how well the teacher's experience develops" (T3).

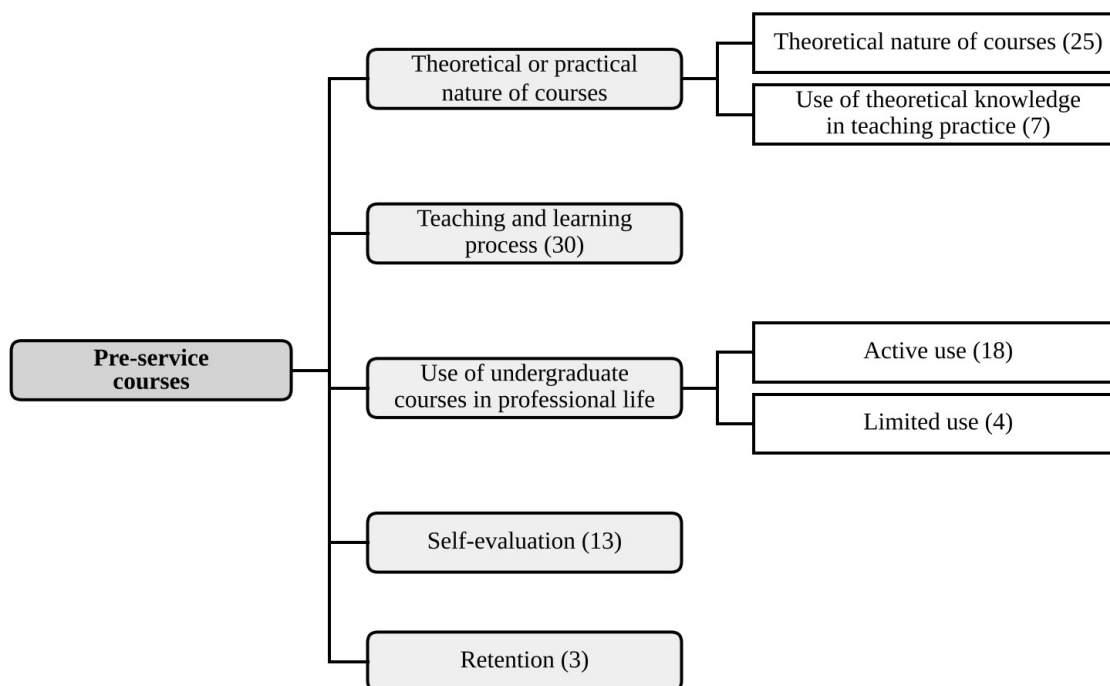
"We could say we learned this on the job, really. You learn it much more by working and doing" (T7).

To be honest, what I struggled with most was this: at university, I think we were prepared as if we would always work one-to-one with students. Honestly, we had to find our own way in this

regard. Planning and carrying out all of this is not really possible in theory. I think it is only possible through long-term training that combines theory and practice. So the theoretical training we received is, in my view, inadequate. (T1)

Figure 3

Special Education Teachers' Views on Pre-Service IEP Development and Assessment Courses



Regarding “use of theoretical knowledge in teaching practice”, teachers mentioned class sizes, differences in performance between students and lesson length. One teacher said:

So we went into the class. There are eight children. Yes, we prepare a plan. But how do you calculate the lesson time, for example? Normally, it is forty minutes. But within those forty minutes, there will be lots of behavior problems. There will be many classroom management challenges. And there will be many students in different performance groups who cannot share common goals. So turning theory into practice is not really possible. (T1)

Under the “teaching and learning process” theme, teachers reported that academics in different special education departments taught the courses differently. These differences concerned the teaching and learning process rather than course content. Some views were as follows:

... in practice, an IEP preparation process was set up based on an imaginary performance profile. Later, we moved on to preparing IEPs based on real performance, the performance of a real child. But there, we were mostly asked to make the move from forms to the IEP ourselves. We prepared them by hand, as far as possible. That was the process. I do not know what it meant. Why did they feel the need to have us prepare them by hand? (T8)

Our lecturer presented sample IEPs of their own. In class, the lecturer asked our classmates to act out a disability. For example, a classmate would come forward, and the lecturer would say: show these behaviors. The child has these difficulties. How would you prepare an IEP for this? What would your priority goals be? What would you do for these children, and what topics would you work on? What would your short-term objectives be? The lecturer did this with each classmate. The lecturer informed us first, and then we prepared an IEP among ourselves. (T9)

How should educational diagnosis and assessment be done? How should an IEP be prepared, where should one start and which stages should it go through? What are the components of an individualized education plan? What should it include and exclude? What is it and what is it

not? In the courses we took, we started from the very beginning. Our IEP lecturer gave a case example, and we prepared IEPs based on these cases. (T4)

There were no documents. The lecturers would tell us to go and prepare an IEP. But how do you prepare an IEP? What do you do? It was not really something we knew well. And I remember we focused a lot on the concept of individual differences. (T7)

Two codes emerged under “use of undergraduate courses in professional life”: “active use” ($f = 18$) and “limited use” ($f = 4$). Regarding “active use”, teachers said that their undergraduate courses had a positive effect on their professional lives. The theoretical training was very useful when developing IEPs. Some views were as follows:

These are important things. Their effect is huge. I was very, very satisfied with the training I received. If I had not taken these courses, who would have taught me? You cannot be a special education teacher without them. Their effect is one hundred percent, very great. (T3)

At my previous schools, I had fellow special education teachers. Whenever we met in subject groups and in provincial or district meetings, we always talked about this. Some teachers who were new to the profession needed support with preparing IEPs. To be honest, the courses I took were sufficient for me. (T4)

Regarding “limited use”, teachers said they used their undergraduate courses when developing IEPs. However, theory did not support practice at certain points. Some views were as follows:

Examples of group instruction, of planning within group instruction and of classroom management were certainly given. But in general, I can understand that the IEP is individual. I think we need more information on how to implement it in a group. (T1)

“The academic process at university and the experience we gained there are not fully sufficient when we go into practice. I still think universities have some limitations in terms of practice” (T8).

Under “self-evaluation”, teachers described the undergraduate IEP and assessment courses as difficult. However, they knew the courses had a positive effect on their professional lives and were glad to have taken them. They also described their training as broad and as a source of guidance. Some views were as follows:

“First of all, the theoretical knowledge we gained in our undergraduate years guided us. I can say that first. I think we have coped with this very comfortably, especially in our professional lives” (T2).

“... but I remember this very well. Our IEP course was one of the hardest courses” (T8).

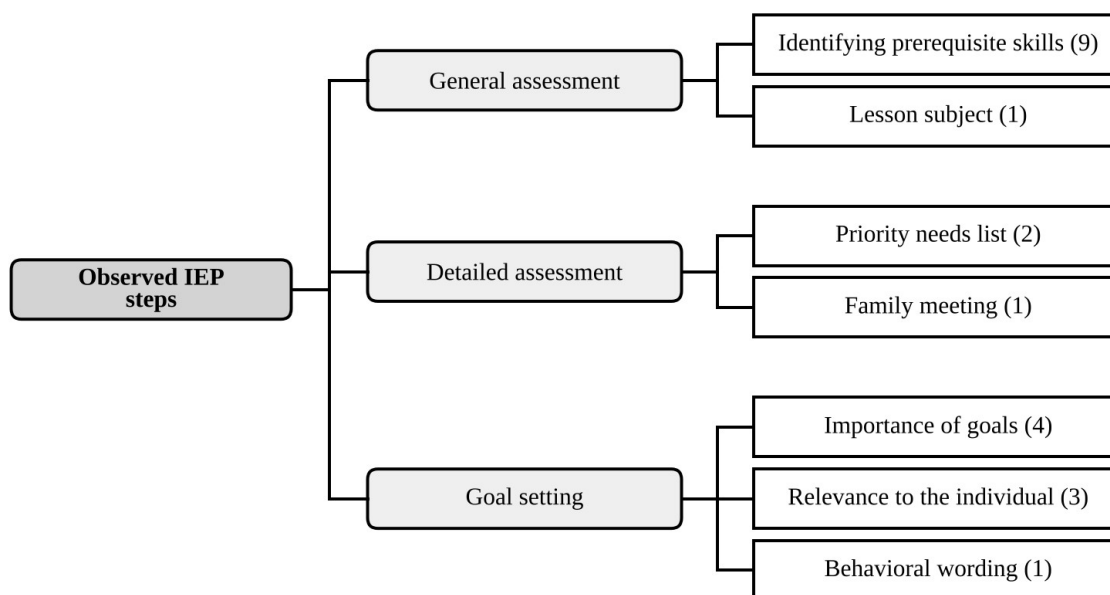
Under “retention”, teachers could not fully recall the theoretical content of their undergraduate courses. However, they had become skilled in IEP development because they do it continuously in their work. Some views were as follows:

“A lot of time has passed...” (T7).

“I cannot remember anything about it right now. Of course, something stayed in our minds from what we learned at university. But we learned much more once we started practicing” (T6).

4.4. IEP Development Steps Observed in One Teacher's Practice

The observation data come from three lesson hours with one teacher (Teacher A). They therefore describe only a limited part of IEP development practice and are used as a point of comparison with the interview data. The observation yielded three categories and seven codes. A total of 21 segments were assigned to these codes. The observation form covered all 11 steps of the IEP development process. However, only behaviors related to general assessment, detailed assessment and goal setting were observed in the three lesson hours. Other steps did not occur during observation. These included selecting teaching methods and materials, setting evaluation criteria, support services and transition planning. The categories and codes are shown in Figure 4.

Figure 4*IEP Development Steps Observed in One Teacher's Practice*

4.4.1. General Assessment Category

The general assessment category included two codes and 10 coded segments. The observed lesson was Turkish. The teacher used a general assessment form and the paper and pencils given to the students. No other assessment tool was observed. The teacher asked the students to read the first sounds of the sound-based literacy method (the sounds “e” and “l”). The teacher also asked them to blend these sounds into a syllable. One observation note read as follows:

The teacher wrote the sounds “e” and “l” from the first sound group one by one for the girl sitting in front and asked her to read them. The girl read the sounds one by one. The teacher then wrote the syllable “el” and asked her to read it. The student read the syllable “el”. The teacher told the girl, “Now you wait”, and wrote the sounds “e” and “l” for the boy, asking him to read them one by one. The boy read the sounds one by one. The teacher then wrote the syllable “el” and asked him to read it. (Teacher A, observation note, 21 September 2022)

The teacher formed the syllable “el” from the sounds “e” and “l” in the first sound group. The teacher then asked the students to write the syllable with the pencils handed out earlier. After the students wrote it, the teacher marked the general assessment form. Another observation note read as follows:

Smiling at the students who read the syllable, the teacher said, “Well done, you read it very well, guys”, and told them to pick up their pencils. The teacher then drew lines on their worksheets and asked them to write the syllable “el”. The teacher told the students who wrote the syllables, “You’re super”. Meanwhile, the teacher marked the form. (Teacher A, observation note, 21 September 2022)

During the observation, the teacher identified what the students knew about the sounds in the first sound group. The teacher then marked the form accordingly.

4.4.2. Detailed Assessment Category

The detailed assessment category included two codes and three coded segments. The observed lesson was mathematics. The teacher had completed the students’ general assessments. The teacher then carried out a detailed assessment by breaking down the goals marked with a minus into their steps. In this category, the teacher also arranged meetings with the students’ families. Some observation notes were as follows:

The teacher placed a worksheet with two-digit plus two-digit addition problems with carrying on the desk for the boy. The teacher said, “Now we’ll work on these together, let’s start”. The

student began the first problem. He added the ones correctly and wrote the carried digit above the tens. He then added the tens, included the carried digit and wrote the result. The teacher said, "Well done, very good". The teacher did not mark anything or intervene while the student was working. The teacher then said, "Let's move on to the next problem". The student added the ones but moved on to the tens without writing the carried digit above the tens. The teacher did not intervene or correct the error at that moment. After the student added the tens and wrote the result, the teacher took a red pen and wrote the carried digit. The student asked, "Teacher, did I do it wrong?" The teacher replied, "Come on, let's move on to the next problem". (Teacher A, observation note, 28 September 2022)

There was a knock at the classroom door. A woman came in and said, "I'm ...'s mother". She was the mother of ..., the student whose detailed assessment was under way. The teacher said, "Oh, welcome", went to the door, said, "Let's talk outside", and stepped out. (Teacher A, observation note, 28 September 2022)

4.4.3. Goal-Setting Category

The goal-setting category included three codes and eight coded segments. The observed lesson was mathematics. After the detailed assessment, the teacher identified the long-term goals (LTGs) and short-term objectives (STOs) to include in the student's IEP. The teacher then moved on to teaching. The teacher also told the student which topics they would work on during the term. In addition, the teacher went beyond the lesson content. The teacher set goals for skills the student may need in daily life and shared them with the student. Some observation notes were as follows:

... The teacher then gave the girl a worksheet and asked her to write and read this problem: "Osman has 48 birds. 12 of them flew away. How many birds does Osman have left?" After she read it, the teacher said, "Yes, ..., this year we'll solve lots of addition and subtraction problems together". On the paper in front of the teacher, the teacher wrote -LTG- and, below it, "... solves addition problems" and "... solves subtraction problems". The teacher guided the student with questions such as "The birds flew away; do you think the number of birds goes down?" and "You have apples and you ate them; do the apples go down?" They then solved the problem together. (Teacher A, observation note, 5 October 2022)

The girl took out the laptop. The teacher said, "Open the screen". After opening it, the girl asked, "Where do I turn it on, teacher?" The teacher said, "From this key", pressed the key and turned the laptop on. Meanwhile, the girl said, "Hmm", and watched the laptop start up. The teacher said, "This year, let's also teach you how to use a computer, go online and use Word and so on". The girl said, "OK, teacher", and smiled. The teacher then wrote -LTG- on the paper and, below it, "... uses a computer". The teacher told the girl, "Using a computer will be useful later on. It'll be good for you when you apply for a job". The girl said, "And I can study for my lessons". (Teacher A, observation note, 5 October 2022)

4.5. Quality of the Four IEPs Examined

The IEP-QAS has 16 items, with a maximum score of 32. Four IEPs developed by four teachers were scored with the scale. The first IEP scored 9, the second 13, the third 13 and the fourth 26. The items are student performance, long-term goals, short-term objectives, use of subject, condition, criterion, measurable and observable wording, positive or negative wording, generalization, time, tools and materials, method, evaluation, goal-functionality-prerequisite relationship, support services and behavior problems. Each item is scored 0, 1 or 2.

The first IEP scored zero on eight items: use of subject, condition, measurable and observable wording, generalization, time, method, goal-functionality-prerequisite relationship and support services. The second IEP scored zero on six items: condition, measurable and observable wording, generalization, time, goal-functionality-prerequisite relationship and support services. The third IEP scored zero on seven items: use of subject, condition, generalization, time, method, goal-functionality-prerequisite relationship and support services. The fourth IEP scored zero on three items: generalization, method and support services. All other items scored 1 or 2. Generalization and

support services scored zero in all four IEPs. Condition, time and the goal–functionality–prerequisite relationship scored zero in three IEPs.

When these scores are read alongside the interview data, a gap emerges. Goal setting, which teachers described as the step they valued most, was among the weakest areas in the documents. Items related to goal writing, such as condition, time and the goal–functionality–prerequisite relationship, scored zero in three of the four IEPs. This comparison is discussed further in the next section.

5. Discussion

This study aimed to provide an in-depth picture of IEP development as an educational program. It drew on the views of different stakeholders, a limited observation and document analysis. Interviews were held with academics who teach the relevant courses and with special education teachers. Both groups play an active role in IEP preparation and contribute to it in different ways. The most important finding was that the practices teachers described in interviews were not fully reflected in the IEPs examined or in the observed practice. This finding is discussed below together with the other results.

Three themes and nine codes emerged from academics' views on the IEP development process. The themes were undergraduate program, problems and suggestions. Academics stressed that special education teachers must be well equipped to assess students with special needs. Teachers must also be able to prepare and implement appropriate, high-quality IEPs. However, academics noted that teachers have gaps in IEP development and assessment, even though they graduated from special education programs. This finding is consistent with studies on teachers' views of IEP development and on the quality of their IEPs (Alan, 2019; Çıkılı et al., 2020; Çimen Öztürk & Eratay, 2010).

Academics who teach assessment and IEP courses also stressed that these courses should be practice-based. This is in line with studies on special education teacher education programs (Ergül et al., 2013). Academics described several problems in IEP development. These included poor IEP quality in schools, a lack of practice in undergraduate courses, different course contents across universities and a lack of resources for assessing students with special needs. The gaps in practice settings and in course-based practice match problems reported in the literature (Alan, 2019; Ayanoğlu & Gür-Erdoğan, 2019; Ersoy et al., 2021; Şengün, 2022).

Five themes and 12 codes emerged from teachers' views on IEP development. The themes were goal setting, communication with stakeholders, IEP evaluation, performance determination and the initial meeting with the family. Teachers often reported that they attach great importance to goal setting. Within this process, they referred most to student-centeredness. Studies of IEP goals have found that IEPs contain more goals than they should (Alan, 2019; Boavida et al., 2010; Rakap, 2015). Read alongside these studies, our finding suggests that teachers value goal writing highly. However, they need support, as well as pre-service and in-service training, to write accurate, high-quality goals.

Teachers valued the process of determining the student's performance. They usually spent two to four weeks on this from the start of the school year. Teachers relied on observation and general assessment forms. They did not mention other assessment methods and were limited to the printed forms they had. This supports findings that performance statements lack functionality, do not serve the goals or do not match them (Boavida et al., 2010; Catone & Brady, 2005).

Teachers showed high awareness of the need to communicate with stakeholders in IEP development. At first sight, this contradicts studies that report problems in collaboration with other stakeholders (Kol, 2016; Kreutzer, 2004; Özan & Sarıca, 2021). However, this finding is based on teachers' own accounts. In the limited observation of one teacher, however, the process was largely carried out by the teacher alone, and academics' views pointed in the same direction. In addition, the researcher was a colleague of the participants. This may have led teachers to describe collaboration more positively than it is. Teachers valued family involvement in IEP development and gave it priority. However, some teachers said they could not always involve the family when preparing IEPs. This supports the finding that family involvement in IEP development is often limited (Kuru Habiboğlu, 2018; Özan & Sarıca, 2021).

Teachers also shared their views on pre-service IEP development and assessment courses. They said these courses had an important place in their professional lives. They stressed that theory from the courses needs to be turned into practice. They also said they could not fully apply this knowledge in their first years of teaching. This is in line with many studies that report a gap between theory and practice (Ergül et al., 2013; Greenwood, 2001; Koca, 2022; Pektaş, 2008).

Academics also described how special education teachers develop IEPs. According to them, graduates develop IEPs without assessing students fully and accurately. They use ready-made IEPs from the internet. They use the same IEPs for years without change. Some develop IEPs only out of concern about school inspections. Academics also said that teachers cannot communicate effectively with the IEP team. In addition, families of children with special needs cannot take an active part in the process. These observations are in line with findings in the literature (Alan, 2019; Avcioğlu, 2011; Bendak, 2011; Christle & Yell, 2010; İlik, 2015; Koca, 2022).

To compare teachers' accounts with practice, the researcher observed one teacher for three lesson hours. During this time, only general assessment, detailed assessment and goal setting could be observed, and the teacher followed these steps in the expected order. However, the teacher worked largely alone in a process that should be a team effort. The teacher made decisions about the student directly, and the brief contact with a parent that was observed did not appear to shape decision-making. These findings are based on three lesson hours with a single teacher and cannot be generalized to other teachers or to the whole IEP process. They are presented only as a point of comparison with teachers' views. Within these limits, they are consistent with previous studies (Alan, 2019; Çuhadar, 2006; Pektaş, 2008; Yıkılmış & Bahar, 2002).

The quality of the teachers' IEPs was examined with the IEP-QAS. The scores showed errors in goal statements and limited use of criteria and conditions. Instructional processes were not included in the IEPs. The IEPs scored lower in these areas. Overall, the quality of the four IEPs examined was not high. This is in line with previous research on IEP quality (Alan, 2019; Boavida et al., 2010; Rakap, 2015). The wide range of scores (9–26) suggests that teachers may differ in their IEP knowledge and practice. Academics' view that teaching and learning differ across universities supports this interpretation. However, this study did not examine the link between teachers' universities and their IEP scores. This explanation should therefore be treated as a possibility.

Teachers also had low recall of the theory from their pre-service IEP and assessment courses. They said they learned IEP development mainly in their first years of teaching, in practice settings. This suggests that practice is limited in pre-service education. The academics also said that IEP and assessment courses remain theoretical, with little practice. This can be seen as a conclusion shared by both groups.

As noted above, the most important finding is the inconsistency between data sources. In interviews, teachers described goal setting as the step they value most. They stressed student-centeredness and collaboration with stakeholders. Yet generalization and support services were missing in all four IEPs. Condition, time and the goal–functionality–prerequisite relationship were missing in three. In other words, goal writing, which teachers said they valued most, was one of the weakest areas in the documents examined. Similarly, teachers often mentioned communication with stakeholders. However, in the lessons observed, IEP decisions were made by the teacher alone. Academics also said that IEP teams rarely meet in practice. This gap suggests that, in this case, teachers' awareness of IEP principles did not necessarily translate into high-quality written programs or team-based practice. Because the observation was limited to one teacher and three lesson hours, the conclusion about teamwork should be treated with particular caution. The document analysis provides stronger evidence for this gap.

Academics highlighted the gap between theory and practice. Teachers said they learned to write IEPs largely on the job. Taken together, these findings suggest that the problem lies less in a lack of knowledge than in the transfer of knowledge into practice. This result also suggests that studies based only on teachers' views may present IEP processes too positively. Teachers' views should be

examined together with document and observation data. Both teachers and academics stressed that well-developed IEPs are key to improving the education of students with special needs.

5.1. Limitations

This study has several limitations. First, interviews with teachers and academics lasted 10–16 minutes on average. This may have limited an in-depth exploration of participants' experiences. Second, the observation data are based on three lesson hours with a single teacher. They do not cover IEP team meetings. They also provide data on only three of the 11 steps in the observation form. The observation findings therefore cannot be generalized to other teachers or to the whole IEP development process. They serve only as a point of comparison with the interview data. Third, the document analysis is limited to the IEPs of four teachers who volunteered to share them. These teachers may differ from the others. Fourth, nine of the ten teachers graduated from programs in teaching students with intellectual disabilities. The study was also conducted in a single province. For these reasons, the findings should be read as an in-depth description of one case rather than as a general picture of IEP development in Türkiye. Finally, the researcher was a colleague of the participants. Despite the measures taken, this may have caused a social desirability effect.

6. Conclusion

This study examined IEP development in one Turkish province from several angles. Its main finding is a gap between what teachers reported and what the documents and the observation showed. Teachers reported that they value goal setting, student-centeredness and collaboration. However, the four IEPs examined showed clear gaps, and in the limited observation of one teacher, the process was carried out largely individually. Both teachers and academics described pre-service IEP and assessment courses as mainly theoretical. Teachers reported that they learned to develop IEPs mainly on the job. Within the scope of this case, these results suggest a problem of transferring knowledge into practice rather than a lack of knowledge alone. Because the observation and document data are limited, these conclusions need to be tested in larger studies. Based on these results, the following recommendations are made.

6.1. Recommendations for Further Research

1. On-the-job coaching in IEP development could be provided to improve the quality of teachers' IEPs. Longitudinal studies could then follow students' attainment and developmental progress under these improved IEPs.
2. The needs of children with special needs and their families, who are key stakeholders in IEP development, could be identified. Improvement work could then be based on these findings.
3. Studies could compare the progress of students whose teachers use IEPs from the internet with that of students whose teachers develop their own IEPs.
4. Future studies could observe several teachers over longer periods, including IEP team meetings and all steps of the IEP development process. Such studies could test whether the gap found here between reported and documented practice holds more widely.

6.2. Recommendations for Practice

1. Academics who teach IEP and assessment courses could prepare and disseminate undergraduate textbooks for national use.
2. Undergraduate programs could add courses in which pre-service teachers apply the theory from IEP and related courses straight away. These practical courses could match the theoretical courses in hours.
3. Professional development activities that include on-the-job coaching could be organized for teachers and for members of IEP teams in schools.
4. Workshops with relevant academics could be organized so that IEP and related courses at different universities have parallel content.

Declarations

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References

- Akkın, A. (2019). *Öğretmenlerin bireyselleştirilmiş eğitim programlarının geliştirilmesi, uygulanması ve değerlendirilmesinde yaşadığı güçlüklerin belirlenmesi ve çözüm önerileri* [Master's thesis, Burdur Mehmet Akif Ersoy University].
- Alan, Ş. (2019). *Özel eğitim okullarında geliştirilmiş olan bireyselleştirilmiş eğitim programlarının (BEP) kalitelerinin incelenmesi* [Master's thesis, Anadolu University].
- Avcıoğlu, H. (2011). Zihin engelliler sınıf öğretmenlerinin bireyselleştirilmiş eğitim programı (BEP) hazırlamaya ilişkin görüşleri [Mental handicapped class teachers' thoughts on preparing IEP (Individualized education program)]. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi*, 12(1), 39–56. https://doi.org/10.1501/Ozlegt_0000000156
- Avcıoğlu, H. (2015). *A'dan Z'ye BEP: Bireyselleştirilmiş eğitim programlarının geliştirilmesi* [IEP from A to Z: Developing individualized education programs]. Vize Yayıncılık.
- Ayanoğlu, Ç., & Gür-Erdoğan, D. (2019). School administrators' opinions on preparation/implementation of individualized education plan (IEP) for students with special needs. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi*, 20(4), 699–706. <https://doi.org/10.21565/ozelegitimdergisi.531039>
- Bendak, L. (2011). The role of individual educational plans in helping cycle one students with dyslexia to become better readers. *Middle East Journal of Family Medicine*, 9(9), 42–47.
- Boavida, T., Aguiar, C., McWilliam, R. A., & Pimentel, J. S. (2010). Quality of individualized education program goals of preschoolers with disabilities. *Infants & Young Children*, 23(3), 233–243. <https://doi.org/10.1097/IYC.0b013e3181e45925>

- Bogdan, R. C., & Biklen, S. K. (2003). *Qualitative research for education: An introduction to theories and methods* (4th ed.). Pearson.
- Catone, W. V., & Brady, S. A. (2005). The inadequacy of individual educational program (IEP) goals for high school students with word-level reading difficulties. *Annals of Dyslexia*, 55, 53–78. <https://doi.org/10.1007/s11881-005-0004-9>
- Christle, C. A., & Yell, M. L. (2010). Individualized education programs: Legal requirements and research findings. *Exceptionality*, 18(3), 109–123. <https://doi.org/10.1080/09362835.2010.491740>
- Council of Higher Education. (2022). *Özel eğitim öğretmenliği lisans programı* [Special education teacher education undergraduate program]. <https://egitim.yok.gov.tr/documentFiles/17593279221.Özel%20Eğitim%20Öğretmenliği%20Lisans%20Programı.pdf>
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson.
- Çıkkılı, Y., Gönen, A., Aslan Bağcı, Ö. A., & Kaynar, H. (2020). Özel eğitim alanında görev yapan öğretmenlerin bireyselleştirilmiş eğitim programı (BEP) hazırlama konusunda yaşadıkları güçlükler [The difficulties of teachers working in the field of special education in preparing individualized education program (IEP)]. *OPUS Uluslararası Toplum Araştırmaları Dergisi*, 15(1), 5121–5148. <https://doi.org/10.26466/opus.659506>
- Çimen Öztürk, C., & Eratay, E. (2010). Eğitim uygulama okuluna devam eden zihin engelli öğrencilerin öğretmenlerinin bireyselleştirilmiş eğitim programı hakkında görüşlerinin belirlenmesi [Determining opinions of teachers of students with mental retardation attending an education application school on the individualized education program]. *Abant İzzet Baysal Üniversitesi Dergisi*, 10(2), 145–159. <https://izlik.org/JA96DE73ZW>
- Çuhadar, Y. (2006). *İlköğretim okulu 1–5. sınıflarda kaynaştırma eğitime tabi olan öğrenciler için bireyselleştirilmiş eğitim programlarının hazırlanması, uygulanması, izlenmesi ve değerlendirilmesi ile ilgili olarak sınıf öğretmenleri ve yöneticilerin görüşlerinin belirlenmesi* [Master's thesis, Zonguldak Karaelmas University].
- Decree Law No. 573 on Special Education. (1997). *Özel eğitim hakkında kanun hükmünde kararname* [Decree law on special education]. <https://www.mevzuat.gov.tr/MevzuatMetin/4.5.573.pdf>
- Ergül, C., Baydık, B., & Demir, Ş. (2013). Özel eğitim öğretmen adaylarının ve öğretmenlerinin zihin engelliler öğretmenliği lisans programı yeterliklerine ilişkin görüşleri [Opinions of in-service and pre-service special education teachers on the competencies of the undergraduate special education programs]. *Kuram ve Uygulamada Eğitim Bilimleri*, 13(1), 499–522.
- Ersoy, A. F., Sancar, E., & Şener, M. (2021). Bireyselleştirilmiş eğitim programı hakkında öğretmen görüşlerinin okul sosyal hizmeti perspektifinden değerlendirilmesi [Evaluation of teachers' opinions on the individualized education program (IEP) from the school social work perspective]. *International Journal of Social Sciences and Education Research*, 7(4), 337–352. <https://doi.org/10.24289/ijsser.942244>
- Evyapan, G. (2020). *Okul öncesi öğretmenlerinin kaynaştırma eğitime ilişkin öz-yeterlilik algı düzeyleri ve bireyselleştirilmiş eğitim programı hakkındaki görüşleri* [Master's thesis, Balıkesir University].
- Greenwood, C. R. (2001). Introduction to the topical issue: Bridging the gap between research and practice in special education: Issues and implications for teacher preparation. *Teacher Education and Special Education*, 24(4), 273–275. <https://doi.org/10.1177/088840640102400402>

- İdin, Ş. (2016). Individualized education programs in teacher practices. *SDU International Journal of Educational Studies*, 3(1), 1–7. <https://doi.org/10.33710/sduijes.329632>
- İlik, Ş. Ş. (2015). *Bireyselleştirilmiş eğitim programı eğitiminin, kaynaştırma öğretmenlerinin BEP yeterliliklerine etkisi* [Doctoral dissertation, Necmettin Erbakan University].
- Kargın, T. (2007). Eğitsel değerlendirme ve bireyselleştirilmiş eğitim programı hazırlama süreci [Educational assessment and the process of preparing individualized education programs]. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi*, 8(1), 1–15.
- Koca, K. (2022). *İlköğretim öğretmenlerinin bireyselleştirilmiş eğitim programı hazırlama yeterlilikleri ve uygulama sürecine ilişkin görüşlerinin incelenmesi* [Master's thesis, Nevşehir Hacı Bektaş Veli University].
- Kol, Ç. (2016). *Kaynaştırma ortamında bulunan işitme kayıplı öğrenci için bireyselleştirilmiş eğitim programı geliştirme sürecinin incelenmesi: Bir eylem araştırması* [Master's thesis, Anadolu University].
- Kreutzer, R. C. (2004). *Teachers' perceptions of the usefulness of individual education plans (IEP)* [Doctoral dissertation, Florida International University].
- Kuru Habiboğlu, N. (2018). *İlkokullarda çalışan sınıf öğretmenlerinin ve rehber öğretmenlerin bireyselleştirilmiş eğitim programı geliştirme birimine ilişkin görüşleri* [Master's thesis, Abant İzzet Baysal University].
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.
- Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research* (6th ed.). Sage.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Sage.
- Ministry of National Education. (2018). *Özel eğitim hizmetleri yönetmeliği* [Special education services regulation]. <https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=24736&MevzuatTur=7&MevzuatTertip=5>
- Orhan, S., & Genç, K. G. (2016). Engellilere yönelik ülkemizdeki özel eğitim hizmet uygulamaları ve örnek ülke karşılaştırması [Implementations of special education services for disabled in Turkey and a comparison]. *Journal of Social Policy Studies*, 35(2), 115–146. <https://doi.org/10.21560/spcd.35323>
- Ozan Leymun, Ş., Odabaşı, F., & Kabakçı Yurdakul, İ. (2017). Eğitim ortamlarında durum çalışmasının önemi [The importance of case study research in educational settings]. *Eğitimde Nitel Araştırmalar Dergisi*, 5(3), 367–385. <https://izlik.org/JA85TR78AC>
- Özan, S., & Sarıca, A. D. (2021). Bireyselleştirilmiş eğitim programı: Sınıf ve rehberlik öğretmenlerinin deneyimleri [The individualized education plan: The experiences of general educators and school counselors]. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi*, 22(1), 147–174. <https://doi.org/10.21565/ozelegitimdergisi.664973>
- Patton, M. Q. (1987). *How to use qualitative methods in evaluation*. Sage.
- Patton, M. Q. (2014). *Nitel araştırma ve değerlendirme yöntemleri* [Qualitative research and evaluation methods] (M. Bütün & S. B. Demir, Eds. & Trans.). Pegem Akademi. (Original work published 2002)
- Pektaş, H. (2008). *Özel eğitim programlarından ve farklı programlardan mezun öğretmenlerin bireyselleştirilmiş eğitim programı kullanma durumlarının saptanması* [Master's thesis, Gazi University].
- Prime Ministry Administration for Persons with Disabilities. (2008). *Özürlüler kanunu ve ilgili mevzuat* [Disability law and related legislation] (3rd ed., Publication No. 43).

https://rameworld.com/upload/files/ozurluler-kanunu-ve-ilgili-mevzuat_2018-07-05_15-39-15.pdf

- Rakap, S. (2015). Quality of individualised education programme goals and objectives for preschool children with disabilities. *European Journal of Special Needs Education*, 30(2), 173–186. <https://doi.org/10.1080/08856257.2014.986909>
- 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>
- Stake, R. E. (2006). *Multiple case study analysis*. Guilford Press.
- Şengün, H. (2022). *İlkokullarda uygulanan bireyselleştirilmiş eğitim programına ilişkin öğretmen görüşlerinin incelenmesi* [Master's thesis, Kırıkkale University].
- Tekin-Ersan, D., & Ata, S. (2016). Okul öncesi öğretmenlerinin bireyselleştirilmiş eğitim programı hazırlanmasına ilişkin görüşleri [Preschool teachers' opinions/views on developing the individualized education program]. *Trakya Üniversitesi Eğitim Fakültesi Dergisi*, 8(1), 162–177. <https://doi.org/10.24315/trkefd.366706>
- World Health Organization. (2022). *Global report on health equity for persons with disabilities*. <https://www.who.int/publications/i/item/9789240063600>
- Yıkımsı, A., & Bahar, M. (2002). Kaynaştırma sınıflarında çalışan öğretmenlerin kaynaştırma becerilerini gerçekleştirme durumlarının saptanması [Determining the extent to which teachers working in inclusive classrooms perform inclusion skills]. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 2(3), 85–95. <https://izlik.org/JA59GW72UZ>
- Yıldırım, A., & Şimşek, H. (2006). *Sosyal bilimlerde nitel araştırma yöntemleri* [Qualitative research methods in the social sciences]. Seçkin.
- Yılmaz, E., & Batu, E. S. (2016). Farklı branştan ilköğretim öğretmenlerinin bireyselleştirilmiş eğitim programı, yasal düzenlemeler ve kaynaştırma uygulamaları hakkındaki görüşleri [Views of primary school teachers from different fields on individualized education programs, legal regulations and inclusion practices]. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi*, 17(3), 247–268. <https://doi.org/10.21565/ozelegitimdergisi.267316>
- Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Sage.