EVALUATION OF TEACHERS' VIEWS ON THE USE OF ARTIFICIAL INTELLIGENCE IN THE EDUCATION OF STUDENTS WITH SPECIAL EDUCATION NEEDS

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Abstract

The aim of the research is to determine the teachers' views on the use of artificial intelligence in the education of students with special education needs. This research was conducted using the case study design, one of the qualitative research methods. It was made to examine in depth how teachers approach the idea of using artificial intelligence in education, what they think about integrating artificial intelligence technology into classroom practices, and what kind of suggestions and expectations they have regarding the development of the use of artificial intelligence. The study group consisted of 54 teachers working in the provinces of Bursa, Çanakkale, and Istanbul in the first semester of the 2024-2025 academic year, determined according to the convenience (easily accessible) sampling method, one of the purposeful sampling types. Data were collected from teachers from different branches and with different years of experience through a semi-structured interview form developed by the researchers. Content analysis technique was applied in the data analysis process, and the findings were classified as codes, categories, and themes.

Keywords: Artificial intelligence, special education, students with special educational needs, teachers' opinions.

Disciplines: pedagogy

Absztrakt

PEDAGÓGUSOK VÉLEMÉNYE A MESTERSÉGES INTELLIGENCIA OKTATÁSI CÉLÚ FELHASZNÁLÁSÁRÓL SAJÁTOS NEVELÉSI IGÉNYŰ TANULÓK ESETÉBEN

A kutatás célja a mesterséges intelligencia sajátos nevelési igényű tanulók oktatásában való alkalmazásával kapcsolatos tanári vélemények megismerése. A kutatás tárgya annak mélyreható megismerésére irányult, hogy a tanárok mit gondolnak a mesterséges intelligencia oktatásban való alkalmazásáról, a mesterséges intelligencia technológia osztálytermi gyakorlatba való integrálásáról, és milyen javaslataik és elvárásaik vannak a mesterséges intelligencia alkalmazásának fejlesztésével kapcsolatban. A vizsgálati csoport 54 tanárból állt, akik Bursa, Çanakkale és Isztambul tartományokban dolgoztak a 2024-2025-ös tanév első félévében. Az adatokat különböző tanszékekről érkező és különböző tapasztalattal rendelkező tanároktól gyűjtötték a kutatók által kidolgozott félig strukturált interjúk felvételével. Az adatelemzés tartalomelemzéssel történt, és az eredményeket kódokba, kategóriákba és témákba sorolták.

Kulcsszavak: mesterséges intelligencia, speciális oktatás, sajátos nevelési igényű tanulók, tanárok véleménye.

Diszciplína: neveléstudomány

Artificial intelligence is a field that enables the computerization of processes typically performed by human intelligence in many fields, including education, healthcare, engineering, economics, and more. With AI, processes such as automating, increasing efficiency, and improving results are achieved through advanced algorithms and high-performance computing processes. Boucher (2020, p. 3) defines artificial intelligence as "the name given to systems that exhibit intelligent behavior by analyzing their environment with a certain degree of autonomy in order to achieve specific goals." In this context, the purpose of artificial intelligence is considered to imitate human intelligence through

computers (Pirim, 2006). Artificial intelligence, one of the newest fields in science and engineering, seeks to build intelligent beings that are not based solely on understanding (Russell & Norvig, 2010). Therefore, artificial intelligence is defined as the science and engineering of intelligent systems that exhibit similar characteristics to humans (Tecuci, 2011).

Defining artificial intelligence is an approach to understanding, modeling, and creating various forms of intelligence. Applications of artificial intelligence are transforming the way people interact with each other and their environments, and modeling in this field is revealing new perspectives on the human mind (Frankish & Ramsey, 2014). As in other fields, innovation efforts are needed in learning media in the field of education; one of these is the use of artificial intelligence in the learning process (Mulianingsih et al., 2020). Therefore, artificial intelligence has turned the attention of the scientific world to issues such as imagination, learning, independent thinking, creativity, inventions, and effective innovation competition in order to create knowledge-based societies (Öztemel, 2020). On the other hand, there are fundamental challenges facing applications related to AI technologies, such as data diversity and generalizability. This is attributed to certain regional or sectoral limitations (İşcan & Dursun-Kaygısız, 2024).

From an education sector perspective, artificial intelligence can be said to play a supportive role in teaching and learning processes. The use of AI in educational environments has positive effects, such as providing students with personalized learning experiences, easing workloads for teachers by providing diverse teaching experiences, and increasing the quality and efficiency of education by providing support for educational institutions with data analysis and guidance (Aşık et al., 2023). By integrating these technologies into educational environments, students' learning motivation and active participation can be ensured, making the learning process more efficient and academic success can be increased (Güler, 2024; Vieriu & Petrea, 2025). As a matter of fact, the results of some studies in the literature prove that the use of artificial intelligence in education has positive effects on student success (Dong et al., 2025; Garcia-Martinez et al., 2023; Sun & Zhou, 2024). In addition, due to its benefits in providing personalized learning opportunities (Chen et al., 2020; Vieriu & Petrea, 2025), artificial intelligence attracts attention as an educational technology that can be preferred in the field of special education. The ability to provide individual learning experiences for the varying educational needs of students with special needs brings artificial intelligence to the forefront in the field of special education. Ayeni et al. (2024) state that AI-supported instruction can provide students with experiences tailored to their individual needs and learning pace, thus creating more inclusive and effective learning environments. In this context, it is believed that the need for individualized learning experiences in special education can be met by AI technologies.

Special Education

Special education is the provision of educational services to individuals who differ in their individual characteristics and specific needs. Those who differ from typically developing individuals, whether due to a disability or disability, seek to meet their educational needs through special education services. The concept of special education is defined in the Special Education Services Regulation as "Special education is an education type provided in appropriate environments with specially trained personnel and educational programs developed to meet the educational and social needs of individuals who differ significantly from their peers in terms of their individual and developmental characteristics

and educational competencies" (Resmî Gazete, 2018).

Therefore, individuals who differ significantly from their peers need to receive special education in line with their sustainable development and educational needs, regardless of the direction of their differences (Doğan, 2019).

Special education includes various methods and strategies to meet the needs of students who have physical, emotional, and sensory needs in addition to their learning needs (Algahtani, 2018). Special education, on the other hand, is designed to meet the specific learning needs of children with special needs. The goal of special education is to help children with special needs gradually adapt to the least restrictive environments. Through these practices, children with special needs are expected to participate in the learning process and activities in schools alongside children with disabilities and to adapt to normal life (Wang, 2023). Special education has four basic characteristics that can be described as unique (Bateman & Cline, 2016). The first of these is the individualization of special education. The second characteristic is that some modifications can be made to the teaching strategies and programs implemented for individuals receiving special education services. The third characteristic is that students receiving special education services are systematically monitored. The fourth characteristic is that students receiving special education services also receive the educational services deemed necessary to implement appropriate educational practices.

Artificial Intelligence in Special Education

When artificial intelligence studies carried out in the field of education are examined, it is seen that knowledge-based, data-based, and logic-based artificial intelligence applications have spread to almost all fields (Arslan, 2020). AI can address persistent challenges in special education, such as automating routine tasks, strengthening individualized education programs (IEPs), providing adaptive interventions for diverse student needs, and increasing teacher efficiency (Harkins-Brown et al., 2025). When the literature on artificial intelligence in the field of special education is examined, it is understood that with the development of artificial intelligence, the use of these applications in special education will gradually increase and that they have serious potential for the lives of students with special needs (Mıhcı & Gezgin, 2023). Because artificial intelligence applications can increase access to new learning opportunities and learning materials for students with disabilities, they can also offer learning tools and methods adapted to students with special educational needs. Teachers' awareness of this issue will significantly contribute to creating an equitable educational environment for students with special needs and disadvantages (Ünal, 2025). Given that individuals with special needs require different educational adaptations than typically developing individuals, the use of artificial intelligence in the education of these students should be implemented through various applications. For example, AI-based vision support systems, optical character recognition (OCR) systems, and sign language recognition and translation can be used to help visually impaired students perceive their environment; audio transcripts and subtitling can be used to help hearing-impaired students under-stand sounds in their classrooms or surroundings; and systems can be used to develop the social skills of students with autism spectrum disorders, and AI-based systems can be used to recognize and regulate their emotional states (Otrar, 2023).

Therefore, utilizing artificial intelligence applications in educating students with special needs is crucial for facilitating their learning and supporting them in areas of need. Therefore, identifying teachers' perceptions of the use of artificial intelligence in educating students with special needs in their classrooms, the types of AI-supported

applications they use, and the challenges and needs they experience in this area are crucial for developing educational services for students with special needs.

Aim of the Research

The aim of this research is to examine teachers' use of artificial intelligence in the education of students with special needs in their classrooms. For this aim, the following sub-objectives were identified: 1) How do teachers approach the idea of using artificial intelligence in education? 2) What do teachers think about the impact of artificial intelligence in meeting the needs of students with special educational needs? 3) What do teachers think about the necessity of using artificial intelligence in preparing individualized education plans (IEP) for students with special education needs? 4) How do teachers evaluate their own educational needs in artificial intelligence?

Importance of the Research

Educational environments in the 21st century are undergoing a radical transformation with the rapid integration of technological advancements into educational processes. Artificial intelligence (AI), one of the most striking elements of this transformation, is being used in a wide range of areas, from individualized instruction to assessment processes in education. AI-based applications, particularly in supporting students with diverse learning needs, offer significant potential for ensuring equal opportunities in education. Therefore, the extent to which teachers utilize AI technologies in educating students with special needs plays a critical role in fostering educational inclusiveness and improving learning environments. However, factors such as teachers' attitudes, knowledge levels, pedagogical competencies, and challenges they face in the process of integrating AI into classroom practices appear to have been insufficiently examined. This hinders strategic planning for the effective use of AI in both teacher training programs and educational policies. In this context, the current research is considered significant for revealing teachers' understanding of the use of AI with students with special needs.

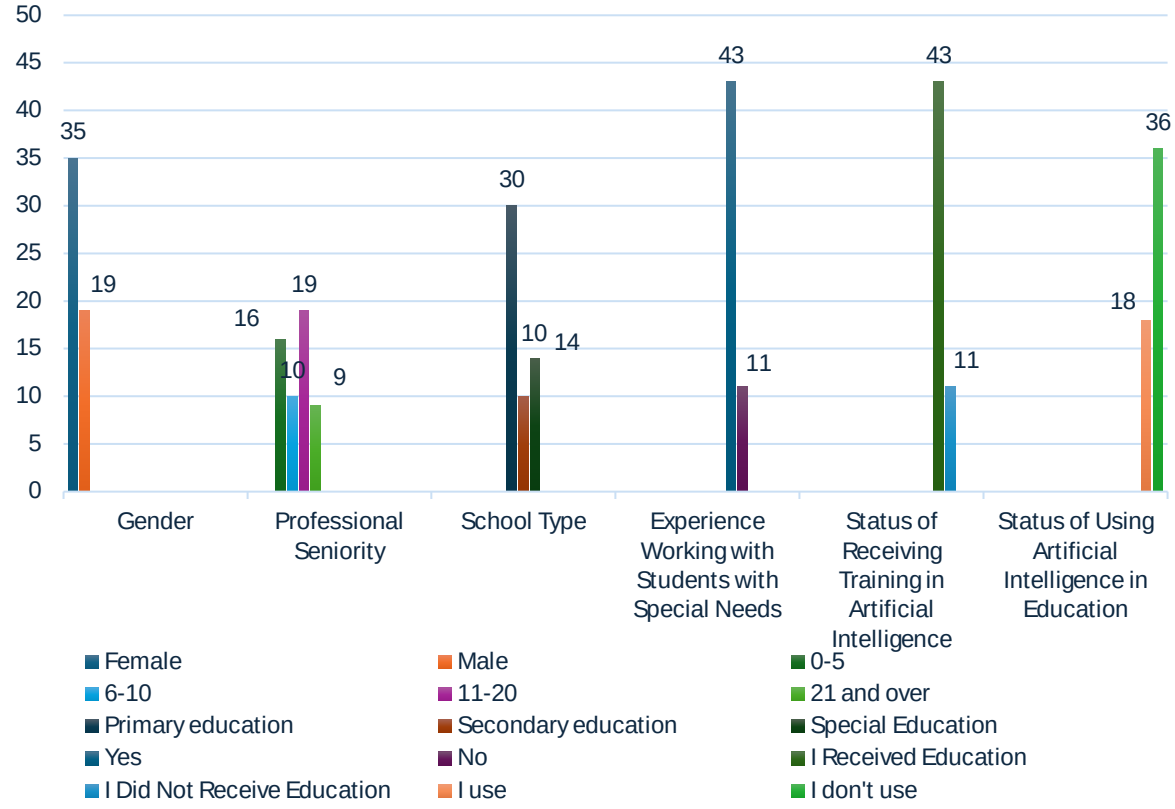
Method

This research is a qualitative study conducted using a case study design. A case study can be defined as an intensive study about a single person, group of people, or unit that aims to generalize to multiple units (Gustafsson, 2017). A case study is a qualitative research model used when a limited system requires in-depth investigation and description (Merriam, 2013). This method is based on obtaining detailed data about the situation by using different information sources and classifying this data under themes (Creswell, 2013). This study examined the case study of teachers' use of artificial intelligence in the education of students with special needs in their classrooms.

Study Group

The study group consisted of 54 teachers working in the provinces of Bursa, Çanakkale, and Istanbul during the first semester of the 2024-2025 academic year, selected through a convenience sampling method. The convenience sampling method was chosen to save time, money, and effort at the expense of information and reliability (Baltacı, 2018). Convenience (easily accessible) sampling is one of the random sampling strategies based on the principle of finding a suitable case that meets the required criteria and then prioritizing participants who meet the sample quota to obtain their opinions (Robinson, 2014). In this context, the study group quota was limited to 54 teachers working in the provinces of Bursa, Çanakkale, and Istanbul. Figure 1 shows the distribution of participating teachers according to their personal information obtained from the interview form.

Figure 1. Distribution of teachers according to their personal information. Source: Authors



In Figure 1, it is seen that of the 54 teachers constituting the study group, 35 were female and 19 were male in terms of gender; in terms of professional seniority, 16 were in the range of 0-5 years, 10 were in the range of 6-10 years, 19 were in the range of 11-20 years, and 9 were in the range of 21 years and above; in terms of the type of school they worked in, 30 worked in primary school, 10 in secondary school, and 14 in special education; 43 teachers had experience working with students with special needs, 11 did not; 43 teachers received training in artificial intelligence, 1 did not; 18 teachers used artificial intelligence in education and training, and 36 teachers did not.

Data Collection Tool

Data for the study were collected using an interview form developed by the researchers. The first phase of developing the form involved reviewing the literature on artificial intelligence technologies in education. Subsequently, an attempt was made to access research conducted on artificial intelligence and special education.

Interview questions were created to determine how artificial intelligence is used in the education process for students with special needs. The questions on the form were finalized after receiving expert opinions from two faculty members working in the field of special education.

The interview form was organized into three sections. The first section included clear and understandable instructions to help participants better understand the purpose of the study and the data collection process. The second section included closed-ended and graded questions to obtain personal information deemed important for the research framework. The third section included open-ended questions to obtain the opinions of participating teachers on the use of artificial intelligence in the context of special education.

Data Analysis

Content analysis, one of the techniques used in qualitative research, was used in the data analysis. Creswell's (2014) linear and hierarchical data analysis approach was used in the content analysis. First, each of the forms obtained from the participating teachers was assigned a sequential number, and codes were defined as T1, T2, T3, etc., to represent the teachers' direct quotations based on the sequential numbers. The data obtained from the teachers were then examined separately according to their order in the interview form, and codes and categories were created. The resulting codes and categories were then revised in accordance with the feedback of all researchers, and the findings were finalized.

Validity

Research in the literature on how artificial intelligence is used in education and special education was reviewed, and care was taken to ensure that the interview form included questions relevant to the purpose of the study. This aimed to ensure the validity of the study's scope. Before administering the interview form, expert opinions were obtained from one linguist for language and expression, and from two academics working in the field of special education for relevance to the purpose of the study. A pilot study was conducted with two teachers to determine participants' understanding of the interview questions. To further clarify the relationships between codes and categories, detailed descriptions were provided using direct quotes from teachers' opinions.

Reliability

Data obtained from teacher interviews were first independently coded and categorized by each researcher. These codes and categories were then reviewed in online meetings with the researchers. Thus, the codes and categories were reorganized and tabulated. Furthermore, some of the teachers' opinions that led to the creation of these codes and categories are presented as is, without any modifications, below the code and category tables generated from the teacher data. This allows readers to see these codes and categories.

Findings

In this section of the research, teachers' opinions on the use of artificial intelligence in the education of students with special needs are discussed under separate headings, taking into account the research questions.

Results Regarding the Necessity of Artificial Intelligence in Education

This section includes an analysis of teachers' responses to the question, "How do you approach the idea of using artificial intelligence in education?" The codes, categories, and themes resulting from the analysis of teachers' opinions, as well as the frequency distributions of opinions within this classification, are detailed in Table 1.

Table 1: The necessity of using artificial intelligence in Education. Source: Authors

Theme	Category	Code	f
Required	Support process for learning	*Positive support for education and training (3), Concretization (3), Providing permanent learning (2), Increasing students' attention span, Developing students' thinking skills, Creating meaningful learning*	13
	Digitalization in education	*Digital transformation in education (3), Integration of technology into education (3), Creating stories, Designing educational games, Enriching educational content, Creating visual and audio processes*	10
	Support for teachers	*Saving time and labor (3), increasing teacher competence, providing method diversity, planning in education, creating activities in lessons, making education interesting*	8
	Individualization in education	*Customized teaching according to learning style, Learning about students' skills and needs, Identifying students' weaknesses, Improving students' weaknesses, Providing materials according to special needs*	5
	Supporting student development	*Supporting academic development, Supporting social development*	2
Unrequired	Negative effects	*Negative impact on social interaction, Emotional and psychological harms of practices*	3
	Providing support to the teacher	*Lack of knowledge about practices, Lack of experience*	2

Table 1 shows that the majority of participants consider AI necessary in education. Teachers stated that they consider AI important for supporting the learning process (f=13), digitalization in education (f=10), teacher support (f=8), individualization in education (f=5), and supporting student development (f=2). Those who believe that AI is not necessary in education expressed hesitation about its negative impact on social interaction and the emotional/psychological harm it could cause to students. Another finding is that teachers lack knowledge and experience in using AI in education. Some of the opinions regarding the use of AI in education are as follows:

"*This is necessary. Using concrete concepts in preschool is very important. For example, I can have AI write a story or make a concept concrete for children by having them play finger games (T28)".'*

"It is necessary; it makes the process of adapting to the technological age easier (T47)".

"I think it is necessary due to the widespread use of technology today (T22)".

"It may be useful, but it is not necessary, because the essence of education is the outcomes arising from the relationships between people. People are social beings, and their education, like their lives, should be based on a social order. Artificial intelligence makes human life easier, but it disrupts the social fabric (T15)".

Results Regarding the Impact of Artificial Intelligence on Meeting the Needs of Students with Special Education Needs

This section includes an analysis of participating teachers' responses to the question, 'What do you think about the impact of artificial intelligence on meeting the needs of students with special education needs?". The codes, categories, and themes that emerged from the analysis of teachers' opinions are detailed in Table 2.

Table 2. The use of artificial intelligence in the education of special education students. Source: Authors

Theme	Category	Code	f
Effectiveness	The impact of diversifying learning and teaching processes	*Diversification of educational activities (6), Diversification of teaching materials (3), Provision of audiovisual digital materials (3), Concretization, Determination of appropriate methods and techniques*	14
	Impact on the development of student competencies	*Improving communication skills (3), Supporting the development of basic life skills, Increasing attention span, Fostering a sense of discovery, Acquiring stereotyped behaviors, and Increasing academic success*	8
	Facilitating the learning effect	*Attracting attention (3), increasing motivation (2), facilitating the learning process, providing effective presentation*	7
	The impact of individualization of education and training	*Meeting individualized educational needs(5), Supporting the education of students with diverse diagnoses (4), Assisting in the preparation of IEPs (2)*	11
	Effect on social harmony	*Simplifying daily routines, Virtual therapy through behavioral monitoring*	2
	Supportive influence on teachers	*Reducing emotional burnout among teachers, Quick access to information*	2

Table 2 discusses the positive effects of using artificial intelligence in meeting the learning needs of students with special education needs on the teaching-learning processes (f=14), individualizing instruction (f=10), developing student competencies (f=8), facilitating learning (f=7), improving social cohesion (f=2), and on teachers (f=2). Based on the codes obtained, the use of artificial intelligence in special education is seen to be effective in providing diversity in educational activities (f=6) and meeting individual educational needs (f=5). Some teachers' opinions regarding the themes, categories, and codes are given below:

"It contributes because it provides visual or audio materials (T51)."

"It can help meet the individual educational needs of teachers with special education needs. It can help prepare special IEP plans. It can be effective in providing visual and audio materials for students with learning disabilities. It can contribute to providing teachers with technological materials (T14)."

"I think it will be especially effective in developing communication skills (T18)."

"It provides fast and effective presentation (T5)."

"It can increase students' motivation and interest; it can enable them to receive more creative education (T50)."

Results Regarding the Necessity of Using Artificial Intelligence in Preparing Individualized Education Plans (IEPs) for Students with Special Education Needs

This section includes an analysis of participating teachers' responses to the question, "What do you think about the necessity of using artificial intelligence in preparing individualized education plans (IEPs) for students with special education needs in your classroom?". The codes and categories generated from the analysis of teachers' opinions are clearly visible in Table 3.

According to Table 3, the majority of teachers stated that the use of artificial intelligence is necessary in creating individualized education plans (IEPs) for students with special education needs. In addition to facilitating the use of artificial intelligence (f=31), it was also stated that it significantly benefits students (f=11).

Table 3. The use of artificial intelligence in the preparation of IEP. Source: Authors

Theme	Category	Code	f
The process of preparing an Individualized Education Program (IEP)	Convenience for teachers	*Facilitating the preparation of an Individualized Education Plan(15), Saving time (5), Providing variety in activities (3), Reducing teacher workload (2), Ensuring the use of appropriate methods and techniques for each student, Providing variety in the methods to be used, Detailed sampling, Contributing to the synthesis of teacher opinions, Facilitating analytical thinking, Easily assessing student performance*	31
	Contribution to students	*Providing support for individual special education needs (5), providing material support based on each student's interests and abilities, ensuring the use of appropriate methods and techniques for each student, the ability to provide diverse instruction through visuals, providing gains in certain areas, Visual and auditory support, and providing equal opportunities in education*	11

Some of the teachers' opinions regarding these categories are as follows:

"It is necessary. When special education needs and course objectives are identified in artificial intelligence tools, it can provide the option to choose from alternative Individualized Education Programs (IEPs) (T14)."

"I think it is very helpful in providing detailed examples (T22)."

"While many teachers prepare IEPs using the copy-and-paste method, why not use AI to create better plans specific to the child's needs? (T43)."

"It definitely makes our job easier and saves us time. This way, we can address a wider range of student needs (T25)."

"I think it will provide equal opportunities in education (T34)."

Results Regarding the Types of Training That Should Be Provided to Teachers on Artificial Intelligence

This section includes an analysis of the responses of participating teachers to the question, "What types of training do you think should be provided to teachers on artificial intelligence?". The codes and categories resulting from the analysis of teachers' opinions, along with their frequency distributions, are detailed in Table 4.

Table 4. Teachers' opinions on artificial intelligence training. Source: Authors

Theme	Category	Code	f
The need for training on artificial intelligence	Basic artificial intelligence (AI) training	*Correct/effective use of artificial intelligence (20), Integrating artificial intelligence into courses (7), Designing an activity (4), Practical training (3), Artificial intelligence in special education (3), Material design (3), Measurement and evaluation (2), Program development (2), Content production and use (2), Programming/coding, Asking the right questions*	48
	Advanced artificial intelligence (AI) training	*Digital educational games (4), Data analysis (2), Student learning algorithm, Student progress monitoring, Virtual reality, STEM, Statistics, Data science*	12
	In-class training	*Classroom management*	1
	Security	*Ethics and security (2)*	2

Table 4 provides the distribution of the content of training teachers expect to receive on artificial intelligence. Teachers' responses are categorized as basic artificial intelligence training (f=48), advanced /advanced artificial intelligence training (f=12), security (f=2), and in-class training (f=1). Teachers most frequently stated that they need training on the correct and effective use of artificial intelligence (f=20). Some of the teachers' opinions on the types of training they should receive on artificial intelligence are as follows:

"In-service and application-based training on topics such as how to use artificial intelligence effectively, its areas of use, and its adaptability to education should be provided regularly, locally, and even in schools (T19)."

"Training can be provided on the dynamics of machine-based learning, the advantages and disadvantages of artificial intelligence, the introduction of artificial intelligence applications that can be used in education, and the classification of artificial intelligence tools that can be used interactively in the classroom or remotely (T14)."

"Data analysis, classroom management, and activity planning training can be provided (T24)."

"Teachers should be trained on what type of AI support to use based on the student's diagnosis and how to determine the student's learning algorithm using AI (T29)."

Discussion, Conclusion, and Recommendations

Regarding the first research question, the most prominent opinion in the study is that the majority of teachers believe the use of artificial intelligence in education is necessary. This result aligns with both the views in national policy documents and the results of theoretical and empirical research in the literature. The action plan focused on artificial intelligence in education, published by the Ministry of National Education [MEB] (2025), emphasizes that artificial intelligence-supported teaching practices can support students' higher-order thinking skills and contribute to teachers' planning and individualization of instruction. Drigas and Ioannıdou (2012) also state that artificial intelligence is one of the most important applications in the field of special educational needs. The literature highlights the importance of teachers' use of artificial intelligence as a technology that supports the learning and teaching processes, identifies individual deficiencies, and contributes to student development (Ng et al., 2023; Şen & Akbay, 2023).

In a study conducted by Zhao et al. (2022), teachers expressed their belief in the necessity of using AI in education because it serves as a significant driving force for innovation and transformation in teaching practices. On the other hand, the study also concluded that AI is unnecessary due to reasons such as negatively impacting social interaction and causing emotional and psychological harm to students. These results may stem from teachers' concerns about the use of AI in education. Indeed, Mıhcı and Gezgin (2023) emphasize the importance of data privacy, freedom, and teacher training in ensuring the successful and ethical implementation of AI in the field of special education. AI integration in special education can bring with it challenges such as data privacy, fair access, ethical use, and autonomous system failures (Deckker & Sumanasekara, 2025; Scott & Zaugg, 2025). In this context, it can be said that teachers' ethical concerns about the use of AI in special education must be addressed.

Regarding the second research question, the study highlights the impact of teachers on meeting the needs of students with special education needs, particularly on the diversification of learning and teaching processes, the individualization of education and training, the development of student competencies, and the facilitating effect on learning. In parallel with this result, Smith et al. (2024) emphasized in their study that artificial intelligence technologies have the potential to create educational environments that better respond to students' needs by providing more dynamic,

realistic, and individualized learning experiences. Bhutoria (2022) stated in his study that artificial intelligence can customize educational content, raise awareness of expected learning difficulties, and improve learning-teaching environments and processes. Mıhcı and Gezgin (2023) stated that artificial intelligence in special education can significantly improve special education by providing personalized learning, assistive technologies, and behavior monitoring. Harkins-Brown et al. (2025) found that artificial intelligence contributes to and enhances the educational experiences of students with special needs, supports individualization and differentiation in instruction, significantly improves the quality of goals in individualized education plans (IEPs), and develops various student skills (phonics skills, etc.).

In this context, it can be concluded that the use of artificial intelligence in the education of students with special needs improves the learning and teaching processes, tailors instruction to individual needs, and has a facilitating effect on learning.

Regarding the third research question, teachers' opinions indicate that artificial intelligence is necessary when preparing individualized education plans for students with special needs. AI supports teachers in preparing individualized education plans, alleviating their workload (Goldman et al., 2024; Aşık et al., 2023), and it also improves the quality of prepared IEPs (Rakap & Balıkçı, 2024). On the other hand, contrary to the research findings, Bhutoria (2022) states that artificial intelligence technologies cannot fully capture individual learning difficulties when preparing individualized education plans for students with special needs because overreliance on technology can overlook certain student realities. Rapp (2005) also noted concerns that the use of assistive technologies in classrooms reinforces dependency rather than fostering independence.

Based on these views, it is crucial to monitor the outcome of AI technologies in education rather than leaving all tasks and processes to these technologies. While AI can assist teachers in preparing IEPs, it's also likely to encourage simplification by pushing teachers toward constant AI-focused planning. This could also be a factor that could reduce teacher quality. Therefore, AI-based IEPs may need to be reviewed and updated to determine how well they address students' individual characteristics. In other words, the use of AI to enhance teachers' IEP preparation processes should be encouraged.

Regarding the fourth research question, it was concluded that teachers should receive mostly basic AI training (correct and effective use of AI, integration into lessons, material and content design, programming and coding, etc.) and, to a lesser extent, advanced AI training. This result indicates that teachers should receive at least basic AI training. Indeed, Wu et al. (2023) concluded in their study that teachers generally have a positive attitude towards AI but have limited understanding and experience in current practice. Similarly, Liu (2024) stated that teachers are the driving force behind AI reform and that it is necessary to equip teachers with AI knowledge to facilitate the integration of AI into education. Şanlı et al.'s (2023) study on the use of artificial intelligence revealed that some teachers lack sufficient knowledge about artificial intelligence, some have some experience, and others are concerned that artificial intelligence will replace teachers in the future and believe it will have significant negative effects. Based on these results, increasing teachers' knowledge of artificial intelligence can eliminate prejudices against artificial intelligence technologies and contribute to overcoming potential problems and obstacles.

Based on the results of this research, experimental and longitudinal studies involving different models on the use of artificial intelligence in the education of students with special needs can be designed. Additionally, courses on the use of

artificial intelligence can be incorporated into pre-service teacher training programs. In-service training programs can also be facilitated to integrate artificial intelligence into education in parallel with teacher training.

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