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TEACHERS' VIEWS ON THE USE OF ARTIFICIAL INTELLIGENCE TECHNOLOGY IN EDUCATION

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Abstract:
With the rapid advancement of technology, significant transformations are occurring in education, one of the most notable being the integration of artificial intelligence (AI). AI enables computer systems to perform human-like tasks, offering opportunities such as personalised learning experiences, closer monitoring of student progress, and data-driven insights for educational institutions. Through these capabilities, instruction can be adapted to individual needs, and learning gaps can be identified and addressed at early stages. However, alongside these advantages, the use of AI in education also raises concerns related to infrastructure limitations, data security, and the diminishing role of human interaction. Therefore, the integration of AI presents both opportunities and challenges that must be carefully balanced. A forward-looking approach requires not only strengthening technological infrastructure but also addressing the needs of teachers and students in a comprehensive manner to ensure quality and equity in education.This study aims to examine teachers' views on the use of AI in education. Designed as a qualitative case study, the research was conducted with 10 teachers. Data were collected through a semi-structured interview form developed by the researchers and analysed using content analysis. The findings indicate that teachers' perspectives on AI use are multifaceted. While AI is seen as a tool that supports teaching, facilitates assessment and content development, reduces workload, and enhances student engagement, concerns have also been raised regarding the quality of learning. Teachers emphasised that reliance on ready-made information, weakening of critical thinking skills, and loss of originality may negatively affect learning processes. In addition, issues such as data security, unclear usage boundaries, and inequalities in access reveal the ethical and managerial aspects of AI use. Moreover, the findings show that AI is reshaping the

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teaching profession. Teachers are moving from knowledge transmission to a guiding role; however, this shift also brings feelings of professional inadequacy and a need for support. Overall, the effective use of AI in education requires a planned and guiding approach that preserves instructional benefits, manages risks related to learning quality, upholds ethical principles, and ensures equitable access.

Keywords: artificial intelligence (AI), writing abilities, English majors, phenomenology

1. Introduction

Education systems are constantly being reshaped through a process of transformation driven by social and technological developments. Digitalisation, which has gained momentum particularly in recent years, has significantly altered the structure of teaching processes, learning environments and the roles of stakeholders in education. One of the most striking aspects of this transformation is artificial intelligence technologies and their increasing prevalence in the field of education. The term 'artificial intelligence' is used to describe computer systems that mimic cognitive functions typically associated with the human mind, such as learning and problem-solving. Luckin (2017) defines artificial intelligence as "*the ability of computer systems to act in ways that could be considered human-like*", whilst McCarthy (2007) describes it as "*a field that investigates how computers can perform activities that appear to require intelligence when carried out by humans*".

According to Russell and Norvig (2010), artificial intelligence is regarded as systems that think like humans, act like humans, think logically and behave logically. The diversity of these definitions reflects the constantly evolving and dynamic nature of the field of artificial intelligence. This diversity also points to how artificial intelligence is utilised across different disciplines and the emergence of new application areas with each passing day. In this context, the development of artificial intelligence has not been limited to technical advancements alone; it has transformed our interactions in daily life, becoming an integral part of our lives almost without us realising it, and has found its place in many areas, particularly through various devices and applications. While smart home systems, autonomous vehicles and mobile applications serve as examples of the widespread use of this technology, the increased use of artificial intelligence in education holds the potential to make learning processes more efficient and effective (İşler & Kılıç, 2021).

At this point, some of the features that distinguish artificial intelligence from other technologies in educational processes include its ability to analyse and personalise the student's learning process, to support information retrieval and decision-making processes by evaluating performance data, and to create an interactive learning environment by responding to students' questions and the problems they encounter. (Duggan, 2020). These functions have not only supported the development of AI-based educational applications but have also led to the emergence of various systems that adapt learning experiences to individual needs. Among the most common examples of AI applications in education are intelligent tutoring systems, recommendation systems and

adaptive learning systems. Intelligent tutoring systems can be defined as pedagogical software that determines which subject, using which method, and at what level should be taught. By utilising artificial intelligence methods, they assess the student's performance and level during the learning process, shape the educational programme based on the data obtained, and interact with the student. (Hasanov *et al.*, 2019). Recommendation systems are software programmes based on machine learning and information retrieval methods that present content likely to be of interest and benefit to the individual (Syed & Zoga, 2018). Adaptive learning systems, on the other hand, analyse individual differences to create systems that provide a personalised learning experience tailored to the student's needs (Somyürek, 2009). One of the most important features of these systems is that they contribute to students gaining meaningful learning experiences whilst also supporting teachers. Artificial intelligence plays a complementary role in the learning process, both enhancing the quality of teaching and creating personalised learning environments (How and Hung, 2019). In this context, how AI-supported systems serve different user groups has become a significant issue.

As in other fields, artificial intelligence has begun to be utilised in education. Baker and Smith (2019) examine AI applications in education from three distinct perspectives: student-centred, teacher-centred, and system-centred educational AI tools. Student-oriented AI applications are software programmes, such as adaptive or personalised learning management systems or intelligent tutoring systems, that individuals use to learn a specific subject. Teacher-oriented AI applications are used to support teachers and reduce their workload by automating tasks such as administration, assessment, feedback and plagiarism detection; they also provide insights into students' learning processes so that teachers can offer support and guidance when needed. System-oriented educational AI applications, on the other hand, serve as a tool that provides information to managers at an organisational level—for example, to monitor data exchange models within faculties or schools. Whilst these approaches demonstrate how AI serves various stakeholders in education, the scope of application for such systems is becoming increasingly diverse today.

Today, AI applications are used in many areas within education, such as personalised learning systems, interactive teaching models, data analysis, smart assistants, and programmes for children with special needs. The vast majority of these applications are aimed at supporting students' learning processes and delivering more efficient, personalised experiences in education (Holmes *et al.*, 2019). Furthermore, they support equity by increasing students' access to quality education, making education more efficient by transforming teaching methods, assessment processes and learning environments and enriching teaching content and enhancing interaction whilst simplifying assessment processes by offering personalised learning opportunities (Bulathwela *et al.*, 2021; Xu & Ouyang, 2022). In this context, artificial intelligence makes the educational process more effective by offering student-specific learning pathways, whilst also assisting teachers in supporting subject delivery, improving assessment processes, providing instant feedback, and offering convenience in classroom management and student assessment (Arslan, 2020; Özer *et al.*, 2023). In particular, given

that individuals growing up in the 21st century have been immersed in technology from the moment they are born and begin using computers and the internet at an early age, there is a growing need for more innovative educational approaches alongside traditional teaching methods (Özyanık, 2023; Pedró, 2020). The ability of AI-supported applications to transform teaching into a more flexible and targeted structure by offering differentiated content contributes to a more effective learning process, whilst also providing teachers with the opportunity to monitor students' development more closely and to plan and organise the teaching process more consciously. Consequently, this process holds the potential to move teaching away from standardised practices towards a more responsive and student-centred structure.

However, the use of artificial intelligence in education is not a process that can be viewed solely in terms of the conveniences it offers. Risks relating to the quality of learning—such as students relying on ready-made information, a weakening of critical thinking processes and a decline in original production—along with issues such as data security, assessment fairness and disparities in access, necessitate that this technology be handled with care within educational settings. This situation also demonstrates that the use of artificial intelligence in education is not merely a matter of individual choice, but rather an area that must be managed within the framework of specific principles and regulations. Indeed, artificial intelligence goes beyond being a tool that influences classroom teaching processes; it emerges as an administrative domain that directly impacts the planning, implementation and evaluation of the education system. In particular, issues such as the reliability of assessment processes, the visibility of student effort, and equality of opportunity in education make the ethical and managerial aspects of AI usage even more significant. Consequently, how AI is to be used in educational settings, within what boundaries it is to be assessed, and according to which principles it is to be guided, are fundamental issues that require attention from an educational management perspective. Furthermore, artificial intelligence is reshaping the role of the teaching profession, shifting the teacher's position within the learning process to a different point. It is evident that teachers are shifting from a role of merely imparting knowledge to one of guiding the learning process, supporting students' thinking, and helping them make sense of what they have learnt. Nevertheless, this shift has, at times, brought with it feelings of uncertainty, inadequacy and a need for support amongst teachers. In this respect, teachers' views and assessments regarding artificial intelligence constitute a significant source of data for understanding the practical implications of the transformation taking place in education. This is because teachers are the key actors who directly experience this technology within the classroom and observe its outcomes. In this context, the research aims to reveal the views of secondary school teachers regarding the use of artificial intelligence in education.

This study was conducted based on responses to the question:

- What are your thoughts on the use of artificial intelligence technology in education?

3. Method

3.1 Research Design

As this study aims to explore teachers' views on the use of artificial intelligence in education, it was conducted using the case study design, one of the qualitative research designs. A case study focuses on examining and describing a specific phenomenon or existing situation in detail within the context of its surrounding conditions (Yin, 2009). It is noted that the case study is an effective method for revealing the complex and multifaceted connections between human relationships, events and environmental factors (Yıldırım & Şimşek, 2011). Accordingly, it was assessed that the case study was the most appropriate approach for the nature of this study.

3.2 Study Group

The study group for this research consists of 10 teachers working in various state schools during the 2025–2026 academic year. In the process of selecting participants, the maximum diversity sampling method was chosen from among the purposeful sampling methods. The primary aim of this method is to ensure that individuals capable of contributing to the research topic from diverse perspectives are represented across the widest possible spectrum by forming a relatively small sample, and to identify common or similar aspects among diverse groups (Yıldırım & Şimşek, 2011). When selecting the teachers to be included in the research group, variables such as gender, age, professional experience, completed undergraduate programme and duration of postgraduate education were considered as factors of diversity. Table 1 presents the demographic characteristics of the teachers.

Table 1: Demographic Variables of Study Participants

Participant	Gender	Subject	Age	Years of Service	Educational Qualification
Ö1	Male	Technology Design	48	25	Bachelor's degree
Ö2	Male	English	46	22	Bachelor's degree
Ö3	Male	Turkish	37	10	Bachelor's degree
Ö4	Female	Mathematics	38	14	Bachelor's degree
Ö5	Female	Religious Studies	36	12	Bachelor's degree
Ö6	Male	Social Studies	44	21	Bachelor's degree
Ö7	Male	Mathematics	28	6	Bachelor's degree
Ö8	Female	English	37	12	Bachelor's degree
Ö9	Male	Science	41	15	Bachelor's degree
Ö10	Female	Social Studies	42	18	Master's degree

The participant profile presented in Table 1 demonstrates diversity in terms of gender, subject area, age, years of professional experience and educational background. The research group, comprising six men and four women, enables a comparison of views on AI-supported educational applications, as the participants work in different subject areas. The age range of 28 to 48 and professional seniority ranging from 6 to 25 years reflect the teachers' varying levels of experience, and these differences provide an important

framework for understanding their perspectives on technology. Furthermore, the fact that the vast majority of participants hold a bachelor's degree offers an opportunity to assess the impact of academic education on perceptions of technology. Overall, the demographic diversity of the teachers facilitates a multifaceted examination of views on the use of artificial intelligence and adds depth to the research.

3.3 Data Collection

The data were collected using a semi-structured 'interview form on the use of artificial intelligence technology in education' developed by the researchers; the interview questions were formulated following a comprehensive review of the literature. To ensure content validity, the form was evaluated by two subject matter experts and a language and communication specialist; it was subsequently revised in line with expert feedback to incorporate necessary amendments. The changes made during this process aimed to both strengthen the form's content and make it clearer and more comprehensible in terms of language and expression. To assess the suitability and comprehensibility of the interview questions for the study's objectives, a pilot study was conducted with two teachers, and the researcher also took some notes in the field. The study data were collected through face-to-face interviews with the participants, which were conducted by the first and second authors. Prior to the interviews, all participants were contacted, and arrangements were made regarding the location and timing. During the preliminary interview, participants were informed about the study's purpose, background and scope; it was stated that participation in the research was voluntary, that the interviews could be terminated at any time and that they could answer the questions according to their own preferences. Participants were informed in advance that a recording device would be used during the interviews; however, they were also told that they could listen to the recordings themselves and, if they wished, could have their entire interview or specific sections of it removed from the recording. In this way, efforts were made to minimise any potential anxiety the recording device might cause among participants. In the study, care was taken to create a suitable interview environment to ensure that participants felt comfortable and secure, enabling them to express their views candidly. During the interviews, care was taken to ensure that participants' responses were independent of the researcher's guidance, thereby striving to maintain the objectivity of the data. Interview durations ranged from 35 to 40 minutes; to enhance the reliability of the data, consistency among teachers' views was analysed, and the results were shared with the participants (Creswell, 2013).

3.4 Validity and Reliability

In qualitative research, various methods are employed to ensure internal validity (plausibility), external validity (generalizability), internal reliability (consistency) and external reliability (verifiability) (Noble & Smith, 2015). In this study, participant validation was used to ensure internal validity. Accordingly, after the interviews were transcribed, feedback was provided to the participants, and they were given the opportunity to review their own views and correct any points they found to be

incomplete or incorrect. To support the transferability of the research, the comprehensive description method was adopted (Lincoln & Guba, 1985), with all stages of the study explained in detail to ensure the reader clearly understands the research process. Inter-coder agreement was used to ensure consistency. Furthermore, to ensure the study's verifiability, an expert review method was applied. During this process, an academic expert in qualitative research was granted access to all sections of the study and asked to evaluate the research holistically in terms of its conceptual framework, aim, problem, method, design, data collection process, analysis and reporting. Upon completion of the study, the changes recommended following the expert review were taken into account, and in the final stage, the themes and codes were reviewed once more to reach their final form.

Miles and Huberman's (1994) percentage agreement method was used to assess the reliability of the coding. Shenton (2004) notes that this method plays a critical role in ensuring reliability in qualitative research. In this context, an academic expert in qualitative research and postgraduate education, who was not part of the research team, was granted access to the raw data and asked to develop themes, categories and codes based on the data. The researchers coded all the data independently according to the specified criteria. One of these researchers is a PhD student in educational management, whilst the other works as a lecturer in the same field. When the observations of both coders were compared in this study, an 85% agreement rate was achieved. This figure is considered a high level of inter-coder agreement (Miles & Huberman, 1994).

3.5 Data Analysis

In the study, the content analysis method was used to group the data according to specific concepts and themes, and the data was interpreted by forming a coherent whole. Content analysis is a method that aims to process data within a specific framework to create a coherent whole and make it comprehensible to the reader. This method facilitates the systematic summarisation and interpretation of information by dividing the statements in the text into smaller, semantically consistent categories (Büyüköztürk *et al.*, 2009). The data obtained through content analysis were grouped according to specific themes, thereby revealing the relationships between the data (Yıldırım & Şimşek, 2011). In this study, the responses provided by participating teachers to open-ended questions were analysed and grouped under common categories. The analyses, initially conducted by two researchers, were subsequently reviewed by the other two researchers and finalised. To assess the reliability of the research, Miles and Huberman's (1994) agreement percentage formula (Agreement percentage = [Agreement / (Disagreement + Agreement)] * 100) was used, and the result was calculated as 0.85. An agreement percentage above 0.70 indicates that the data analysis process is reliable (Miles & Huberman, 1994). To ensure the consistency of the coding, independent evaluations were carried out among the researchers, and the results were compared; based on these evaluations, it was determined that the analyses were highly reliable.

4. Findings

In this study, which was conducted to determine teachers' views on the use of artificial intelligence in education, the data collected from the participating teachers were analysed, and the findings, together with the relevant themes and codes, are presented in the sections below.

4.1 Participants' Views on the Use of Artificial Intelligence Technology in Education

The semi-structured 'interview form on the use of artificial intelligence technology in education', prepared by the researchers, includes an open-ended question designed to identify teachers' thoughts on the use of artificial intelligence technology in education. The themes and codes derived from the participants' responses to this question are presented in Table 2.

Table 2: Themes and Codes Relating to the Use of Artificial Intelligence in Education

Theme	**Codes**
Contributions to Teaching	Facilitating assessment processes
	Supporting content creation
	Reducing workload
	Increasing student engagement
Issues Related to Learning	Reliance on ready-made information
	Weakening of higher-order thinking skills
	Loss of originality
Control and Ethical Requirements	Protection of data security
	The necessity of specific rules
Inequality and Access	Differences in access to technology
	Risk of undermining equal opportunities
Professional Transformation and Competence	The evolving role of the teacher
	Sense of professional inadequacy
	Need for support

When Table 2 is assessed as a whole, it becomes apparent that teachers' perceptions of artificial intelligence are not shaped by a simple acceptance or rejection, but rather by the combined influence of various factors. The findings under the theme of '*contributions to teaching*' indicate that artificial intelligence is viewed as a tool that reduces the teacher's workload, supports the teaching process and enhances classroom interaction. In contrast, the "*learning-related issues*" theme points to significant pedagogical concerns, such as a weakening of students' thinking processes and a decline in original production. The themes of "*control and ethical requirements*" and "*inequality and access*" highlight that the use of artificial intelligence can create various problems when left to individual preferences; therefore, it must be supported by specific rules, guidance and equal access opportunities. The theme of "*professional transformation and competence*" demonstrates that this process is reshaping the role of teachers and that it is important for teachers to be supported in adapting to this change. Consequently, the table reveals that the effective

use of artificial intelligence in education is possible only through the preservation of its benefits, the balancing of emerging risks, and the planned management of the process.

In this context, the key themes identified under the '*contributions to teaching'* category are: '*streamlining assessment processes, supporting content creation, reducing workload*, and *increasing student engagement*'. Within this framework, one of the most evident manifestations of these contributions is seen in applications that alleviate the time and workload pressures teachers face during assessment and evaluation processes. Some participants stated that artificial intelligence accelerates assessment and evaluation processes, making them more systematic, objective and data-driven; this enables teachers to identify learning gaps more easily and plan the teaching process accordingly, whilst also allowing them to monitor students' progress more closely and create time for individual support. Participant statements on this matter are as follows:

> "*It's now much easier to review students' answers collectively and get an overall picture. I can see more clearly which learning outcomes are lacking and adjust my lesson plan accordingly.*" (Ö2)

> "*The assessment process used to take up a lot of my time. Now it's both faster and more organised. This gives me extra time to focus on students individually."* (Ö3)

> *"There are nearly 30 students in the class; keeping track of each one's performance individually used to be very difficult. Thanks to artificial intelligence, I can monitor the students' progress more consistently. In particular, I can spot more quickly which topics they are struggling with."* (Ö4)

> *"When assessing open-ended questions, there were sometimes points that slipped through the net. AI supports me in this regard. I believe I can now make more consistent and objective assessments."* (Ö7)

However, the contributions AI makes to the teaching process are not limited to assessment; it also provides significant support in teachers' processes of preparing lesson materials and increasing content diversity. Some participants emphasised that AI accelerates the lesson preparation process, making it easier to produce materials suitable for different levels, relevant to daily life and varied; thereby making teaching more flexible and increasing in-class motivation, as follows:

> "*I prepare different examples and small activities before the lesson. Finding materials that connect with everyday life has made my job easier."* (Ö8)

> *"Last week we did a 'story writing' activity. First, I gave them an opening paragraph, then the pupils wrote the rest. Preparing this sort of material used to be difficult. Now the lessons are more lively, and the children are more enthusiastic."* (Ö3)

"The levels in my class vary greatly. Instead of one-size-fits-all activities, I now prepare a range of activities for the same topic, progressing from easy to difficult. This helps me keep the whole class engaged in the lesson." (Ö4)

"It's highly functional for lesson planning, creating activities for different levels, and producing learning materials. Especially as I have students of varying levels in my class, it saves me a significant amount of time in producing content suitable for them." (Ö9)

On the other hand, the conveniences offered by this technology enable teachers to manage their daily professional responsibilities more efficiently, thereby contributing to a better balance of their overall workload. In this regard, some participants state that artificial intelligence reduces teachers' workload by speeding up time-consuming tasks such as weekly planning, searching for materials and post-lesson evaluation; thereby allowing teachers to spend less time on these tasks, focus more on the quality of teaching and use their time more efficiently, as follows:

"Preparing the weekly plan used to be one of the most exhausting parts for me. Now I can create the basic framework more quickly and then make my own adjustments. This has lightened my load." (Ö1)

"I used to have to search through different sources one by one to prepare an activity. Now that the time spent searching has been eliminated. I can devote my energy to how I'm going to deliver the activity." (Ö5)

"One of the things I found most challenging was the work to be done after the lesson. Assessment, feedback, planning… It all piled up. Now that these processes take less time, I take less work home in the evenings." (Ö9)

Furthermore, it is evident that AI-supported applications stand out as a factor that increases students' level of participation in lessons by making the learning process more interactive. In this context, some participants state that AI-supported activities increase in-class participation, thereby involving more students in the process and contribute to the creation of a more interactive, inclusive and student-centred learning environment. Their comments on this are as follows:

"*When I used different types of activities, I noticed that shy students in particular were participating more in the process. A class began to form where students were not just listening, but participating."* (Ö5)

"Because the levels in the class varied so much, some students were losing focus during the lesson. When I used AI to generate examples of varying difficulty and incorporated them into the lesson, the number of students remaining passive decreased." (Ö2)

"I took an introductory paragraph from AI, and the students wrote the rest. I saw that even students who would normally hand in a blank sheet of paper wrote at least a few sentences." (Ö3)

Alongside findings regarding contributions to teaching, it is evident that the use of artificial intelligence also brings with it certain limitations regarding the quality of the learning process. This situation necessitates addressing the theme of *'learning-related issues'*. Participants noted that the use of artificial intelligence weakens the depth of learning by directing students towards ready-made information; it negatively affects their abilities to think, understand and generate knowledge; the resulting outputs do not always reflect the student's actual level of learning; and it increases the risk of a loss of originality. Some participants' views highlighting that students increasingly turn to ready-made content in their information-seeking process are presented below:

"Children already struggle to concentrate; when systems that provide ready-made answers come into play, they become completely lazy. In the homework I set last week, three students' sentences were almost identical. This isn't learning, it's copying. It's also very important for children to express their own thoughts. This doesn't develop when they just take everything ready-made." (Ö5)

"The most striking thing I've noticed in composition assignments is this: the text the student writes is linguistically very sound, but in class, the same student struggles to put two sentences together. When I ask, they say, 'I looked it up on AI, sir.' In other words, without experiencing the creative process, they simply appropriate a ready-made text; this prevents learning from becoming internalised." (Ö6)

"Last week, during a problem-solving activity, I asked the students to explain their approach. Most had reached the correct answer, but when I asked, 'How did you do that?', they couldn't explain it. This is because they hadn't worked out the solution themselves; they had simply taken it directly from the AI. This situation shows that learning remains solely result-oriented." (Ö7)

"There is a significant discrepancy between students' vocabulary in written tests and the assignments they've previously submitted. Whilst they use much more advanced expressions in their assignments, they construct simple sentences in exams. This situation demonstrates that the ready-made information provided by artificial intelligence masks the student's actual level of learning." (Ö1)

On the other hand, it is observed that students' preference for direct access to information during the learning process bypasses the thinking process, thereby limiting their ability to question, relate and make sense of information; consequently, a clear trend of weakening in higher-order thinking skills such as analysis, interpretation and justification has emerged. Some participants stated that the use of artificial intelligence

restricts students' thinking processes, directing them towards ready-made information; that it weakens their higher-order skills, such as critical thinking and establishing cause-and-effect relationships; and that it leads to learning taking on a more superficial and passive structure. Their views on this matter are as follows:

> *"In the past, when I asked students to analyse a text from different perspectives, they were able to express their own viewpoints. Now, however, they tend to accept a single interpretation generated by artificial intelligence as the correct one and find it difficult to think beyond it. This situation leads to a restriction of critical thinking."* (Ö3)

> *"When I observe students during the idea-generation phase of project work, I see that they turn directly to artificial intelligence. They take the first suggested idea and use it, without making any effort to generate alternatives or explore the idea in greater depth. In particular, they are unable to respond when asked to adapt the information to a different context. This is because, in previous work, they have relied on the ready-made answers provided by artificial intelligence rather than structuring the information themselves. This leads to a significant weakening in terms of creative thinking and originality."* (Ö9)

> *"When I ask, 'why did this result turn out this way?' regarding the outcome of an experiment in a science lesson, students struggle to explain it. This is because they have learnt the result from artificial intelligence but have not established the cause-and-effect relationship themselves. This limits their ability to interpret and make connections."* (Ö10)

It is evident that another prominent code under the theme of 'learning-related issues' is *'loss of originality'*. Participants' statements reveal that, alongside students' reliance on ready-made content, there has been a decline in their ability to form their own thoughts, develop different perspectives, and express themselves in individual ways. Some participants emphasise that the use of artificial intelligence weakens students' processes of developing original thinking and expression; they highlight that, with the increasing reliance on ready-made content, student work becomes more similar, individual contributions take a back seat, and students struggle to take ownership of the content they produce. Statements regarding this are as follows:

> *"In the poster projects we do in class, students used to come up with very different designs and slogans. Now, however, many students' slogans follow the same structure, and sometimes even use the exact same words. They say they're getting suggestions from AI, but this is preventing them from developing their own style of expression."* (Ö2)

> *"In the stories I set on the same topic last term, the students' characters, the development of events, and even the metaphors they used were very similar. You can see the phrasing from one student's text almost exactly in another's. When I asked, most said they'd taken examples from AI and 'tweaked them a bit'. But those small changes don't make the text their own; they're simply rewriting a ready-made text."* (Ö3)

"For example, you ask them to explain something; after the presentation, when you ask 'why did you choose this example?', they cannot explain it. Because the example isn't theirs—it's a ready-made example suggested by the AI. This clearly demonstrates that the student isn't producing content based on their own thinking. Even if the text they present is linguistically very polished, it remains entirely superficial emotionally." (Ö8)

The findings obtained following contributions to teaching and issues related to learning reveal that control and ethical requirements have become a decisive factor in ensuring that the use of artificial intelligence can be carried out in a safe, fair and responsible manner. Under the third theme that emerged in this context—the 'Need for Control and Ethics'—teachers clearly highlighted the importance of ethical and regulatory frameworks for the sustainability of AI applications, drawing particular attention to the need to safeguard data security and establish specific rules governing the use of AI. Under the heading of 'Protecting Data Security', some participants highlighted that students have not developed sufficient awareness regarding data security and privacy in the use of artificial intelligence, and that this situation poses risks to information that needs to be protected, as outlined below:

"A student described how they had written to an artificial intelligence system to resolve a dispute they were having with classmates. Whilst typing, they entered their friends' names and the details of the incident one by one. This means not only sharing their own data but also disclosing other students' personal information without permission." (Ö5)

"Some students upload their prepared presentations directly to artificial intelligence to improve them. However, these presentations contain the school name, class details, and sometimes even photographs. They have absolutely no awareness of which servers this data is stored on or who might have access to it." (Ö10)

"One of my students said, 'I write in detail so that the AI gives a better answer,' and explained that they had entered their academic performance, the subjects they struggle with, and their exam results into the AI. Even this kind of academic data actually falls under the category of personal data, and students are unaware of this." (Ö8)

"It is not known which country most of the AI tools used by students belong to, nor how they process data. This uncertainty poses a serious risk, particularly regarding the protection of children's data, and I believe we need to be more cautious in this regard." (Ö4)

On the other hand, in addition to risks related to data security, the unclear boundaries of AI usage also make it difficult to conduct the process effectively. In this context, under the heading of the necessity for specific rules, some participants emphasised that the failure to establish clear and common criteria regarding the form

and extent of AI usage leads to significant issues in terms of fairness, transparency and the visibility of labour, as follows:

> "*Neither banning AI entirely in assignments nor allowing it completely works. Last week, for the same assignment, some students wrote it entirely themselves, whilst others copied it directly from AI. This creates a serious injustice. That is why I believe there needs to be clear rules on how much and how it should be used".* (Ö2)

> *"One of my students told me they had AI generate their entire presentation. When I asked, 'So what did you do?', they replied, 'I edited it.' But what they meant by 'editing' was simply changing the headings. At this point, the boundary between the student's own effort and the AI's contribution needs to be clearly defined".* (Ö3)

> *"It is becoming increasingly difficult to determine the extent to which students utilise AI in projects. This is because most students conceal their use. If rules are established from the outset—such as 'you may use this much, and you must cite your sources'—this would ensure transparency and reduce ethical issues."* (Ö7)

Furthermore, the data obtained indicates that the use of artificial intelligence is not merely a matter of security and regulations, but is also closely linked to disparities in access and opportunities within educational settings. In this context, under the fourth theme identified in the research—*Inequality and Access*—teachers focused *particularly on disparities in access to technology* and *the risk of undermining equality of opportunity*; they stated that differences in access to and usage levels of artificial intelligence could lead to inequalities among students, particularly in learning processes and assessment outcomes, thereby undermining the principle of educational justice. Their assessments on this matter are as follows:

> *"There is a situation in the classroom that has caught my attention: whilst students with computers and unlimited internet at home actively use artificial intelligence, those from rural areas or with limited financial means cannot benefit from this opportunity. This creates a serious inequality of opportunity within the same class."* (Ö1)

> *"Some students use paid artificial intelligence applications and produce more advanced content. Other students, however, are forced to make do with only free and limited tools. This difference is directly reflected in the students' performance".* (Ö7)

> *"In our discussions with parents, we see that some families purchase private tablets and app subscriptions for their children, whilst others struggle even to afford an internet package. This situation clearly demonstrates that the opportunities offered by artificial intelligence are not reaching all students equally."* (Ö10).

"I've been setting the same kind of performance assignments for years; I used to be able to gauge a student's level much more clearly. Recently, some students have been handing in very well-structured texts generated by artificial intelligence, but they can't explain the same topic in class. Despite this, receiving high marks creates a serious injustice for students who are actually learning." (Ö4)

"In my experience, the difference between students who put in the effort and those who use pre-made content is becoming increasingly blurred. Students using AI produce more 'flawless' work, but this flawlessness does not reflect their own effort. When we cannot clearly distinguish between them during the assessment process, equality of opportunity is undermined." (Ö9)

"I have observed a situation in the classroom: a student writing at their own level produces a simpler but more sincere piece of work; a student using artificial intelligence, however, presents a more academic text. Yet, as assessment tools predominantly evaluate the outcome, the second student receives a higher mark. This creates an inequality based on the product rather than the process." (Ö6)

When contributions to teaching, learning-related challenges, ethical requirements and access-based inequalities are considered together, it becomes clear that the use of artificial intelligence brings about a process that transforms not only classroom practices but also the very nature of the teaching profession. In this context, within the final theme of the research, '*Professional Transformation and Competence*', the codes '*The transformation of the teacher's role*', '*Sense of professional inadequacy*' and 'Need for support' stand out. Within this framework, the first code to emerge under this theme, 'The *Transformation of the Teacher's Role*', reveals that in AI-supported learning environments, the teacher has evolved from a position of merely imparting knowledge to one of guiding the learning process, providing mentorship, and supporting students in making sense of their learning. Some participants' assessments on this subject are as follows:

"The aspect I found most challenging whilst teaching recently was this: students access 'correct' information about a topic very quickly, but they never question where that information comes from or the context in which it was produced. In one lesson, I specifically asked them to present different AI outputs for the same question. There were contradictions between the texts, but the students didn't even notice. At that moment, I realised that my role is no longer to provide information, but to make the reliability and limitations of that information visible." (Ö1)

"In maths, students no longer struggle to reach the correct answer, but they do struggle to spot an incorrect solution. One day, I deliberately presented a wrong solution, saying, 'This is what the AI did.' Most of the class accepted it without questioning it. Since that lesson, I have been trying to instil the habit of questioning the solution rather than simply teaching the solution." (Ö4)

"What caught my attention in the classroom is that students using artificial intelligence produce 'neater' work, but this work does not align with their performance within the class. After noticing this contradiction, I no longer look solely at the end product; I also try to understand how the student created it and the stages they went through. I believe this significantly changes the teacher's role." (Ö5)

On the other hand, as a natural reflection of this transformation process, the second code that emerged within the theme—*'a sense of professional inadequacy'*—reveals that teachers sometimes feel inadequate, unprepared or insufficient as they adapt to changing learning environments and rapidly evolving forms of knowledge production. At this point, some participants emphasised that the mismatch between the work produced by students in AI-supported learning environments and their actual level of learning has become apparent, and that this situation creates a sense of inadequacy among teachers regarding the ability to assess learning in depth and effectively guide the process, as highlighted below:

"There's something I've noticed for a while now. When I start explaining, some students say, 'We already know this, teacher,' trying to speed things up. However, when I ask them to go into more detail, it becomes clear that they've only scratched the surface and haven't fully understood. This leaves me in a bind; I feel I can't keep up with their pace, and I struggle to determine whether they've actually learnt the material or not. This dilemma has turned into a point where I feel inadequate as a teacher." (Ö2)

"In maths lessons, students can reach the correct answer but cannot construct the logic behind the solution. However, I find it difficult to gauge which question to ask to really make the student think. So the problem isn't just with the students; I also think I haven't yet fully established a teaching method suited to this new situation." (Ö7)

"In science lessons, when assessing students after an experiment, I see significant discrepancies between what they write and their performance in class. I'm not clear on how to evaluate this discrepancy fairly. If I look at the end product, it's wrong; if I want to observe the process, there isn't enough data. This uncertainty has become one of the areas where I struggle most professionally and feel inadequate." (Ö9)

However, the third key theme identified in this context, *'Need for support'*, highlights that teachers require continuous, practical and guidance-oriented support mechanisms to adapt to changing learning environments and overcome the resulting professional uncertainties. Participants' views on this are as follows:

"I'm learning how to use AI in the classroom through trial and error. Sometimes it works, sometimes it completely disrupts the process. Frankly, I need to see concrete examples of 'how to use it in this situation". (Ö5)

"I'm not clear on how to assess an AI output that a student brings in. How much of it should I count as their own effort, and what should I not accept? Having to determine these boundaries on my own is challenging. It would be helpful to have a common framework and guidance on this." (Ö8)

"I use AI when preparing lesson plans, but I can't always judge how pedagogically sound this is. Sometimes I'm not sure whether the activity I've prepared is appropriate for the student's level. I feel isolated at this point; I think I'd make better progress if there were a structure to guide me." (Ö10)

When the research findings are assessed as a whole, it becomes clear that teachers' views on artificial intelligence are not shaped by a one-sided acceptance or rejection; rather, they exhibit a multifaceted structure in which benefits, risks and needs are evaluated together. Whilst artificial intelligence offers teachers significant advantages by saving time, increasing content diversity and supporting student engagement in the teaching process, it also entails certain significant limitations in terms of the quality of learning, due to factors such as students' reliance on ready-made information, the weakening of their thinking processes and the decline in their original production skills. In this regard, it is evident that the decisive factor is not so much the existence of artificial intelligence as how it is used. Furthermore, issues such as data security, assessment fairness and access inequality demonstrate that the use of artificial intelligence is not merely a matter confined to the classroom teaching process, but also carries ethical, administrative and social dimensions. In particular, teachers' sensitivities regarding data security, assessment fairness and the visibility of student effort indicate that, should the process proceed unchecked, the principles of trust and equality in education could be undermined. Furthermore, the emerging process of professional transformation is redefining the teacher's role; it is shifting the teacher from the position of a mere transmitter of knowledge to that of a guide who helps students make sense of their learning, manages the process and fosters a critical perspective. However, this transformation also brings with it uncertainties and a sense of inadequacy; it highlights the need for systematic, practice-oriented and sustainable support mechanisms to enable teachers to adapt to this new role. Within this framework, the findings clearly demonstrate that the effective use of artificial intelligence in education must be addressed within a structured, guiding and equity-focused framework, rather than through individual efforts.

5. Results and Discussion

The findings of the study reveal that the use of artificial intelligence in education is evaluated by teachers within a multifaceted framework comprising interrelated aspects such as contributions to teaching, learning-related challenges, ethical requirements, inequalities in access, and professional transformation. This situation indicates that artificial intelligence should be regarded not merely as a technical tool in educational

settings, but as a transformative element with educational, managerial and ethical dimensions that reshapes teaching processes, the nature of learning and the boundaries of the teaching profession. Indeed, the fact that teachers, whilst benefiting from the conveniences offered by this technology, simultaneously express concerns regarding fundamental issues such as the depth of learning, the visibility of student effort, and educational equity, clearly demonstrates that this is an area requiring the simultaneous management of both opportunities and risks.

In this context, teachers' perception of artificial intelligence as a tool that supports the teaching process, facilitates assessment procedures and reduces workload aligns with the findings on personalisation, monitoring of student performance, efficiency and pedagogical support highlighted in studies such as those by Ahmad *et al.* (2021) and Bayraktar (2023). On the other hand, it is emphasised that AI enables teachers to use their time more efficiently, thereby channelling this time into activities aimed at student learning (Bryant, 2020), and that it makes significant contributions to the monitoring of student performance and the development of data-driven teaching processes (Lin, 2023). In this context, the findings of the current study reveal that artificial intelligence is not merely an auxiliary tool in education but a powerful element that transforms the quality of teaching processes. However, the research findings also clearly demonstrate that artificial intelligence imposes certain limitations on the quality of learning. Findings such as students' reliance on ready-made information, the weakening of thinking processes, and a loss of originality are consistent with the risks of superficial learning, weakened social skills, and reduced productivity highlighted by Altun (2024) and Boztepe (2025). This situation highlights that, whilst artificial intelligence serves as a tool to support learning, it also creates a risk area that could threaten the depth of learning. Consequently, it can be argued that where the use of artificial intelligence is not embedded within a conscious and pedagogical framework within the teaching process, there is a risk that learning may be reduced to a more result-oriented, superficial structure and that the student may be removed from the role of an active agent and pushed into a passive position of merely consuming ready-made knowledge.

6. Conclusion

The study's findings regarding ethical and administrative dimensions also reveal a striking divergence. Whilst the literature strongly emphasises that artificial intelligence can enhance equality of opportunity in education (Holstein & Doroudi, 2021; Turgut, 2024) and that AI activities significantly enhance academic achievement and innovation skills (Arıkan, 2025), this study highlights that teachers, in particular, express concerns that disparities in access could generate new forms of inequality. In this respect, the study aligns with the key problem areas highlighted in the literature on the use of artificial intelligence. Alongside findings regarding data privacy, ethical issues, digital inequality and a lack of technological literacy (Akyel & Tur, 2024; Limna, 2022), it also shares similarities with assessments concerning the weakening of human interaction (Boztepe, 2025). In particular, findings regarding assessment fairness and the visibility of student

effort demonstrate that artificial intelligence is not merely a tool used in the teaching process, but a factor that directly influences the learning process, classroom interaction and the concept of educational justice and thus constitutes an area requiring regulatory oversight. In this respect, the study strongly highlights the need for artificial intelligence to be addressed within the framework of policy, oversight and ethical principles. In this respect, the study strongly demonstrates that artificial intelligence must be addressed within the framework of policy, regulation and ethical principles. The findings of the research also reveal that artificial intelligence is transforming the nature of the teaching profession. Indeed, the shift of the teacher's role from that of a knowledge transmitter to a guiding role (Zhao & Liu, 2018), and the emergence of a more flexible, technology-based and student-centred structure (Chassignol, 2018), are consistent with these studies; however, it is observed that this transformation also brings with it a sense of professional inadequacy and a need for support among teachers. On the other hand, this situation also indicates that teachers need to be supported not merely as users of technology, but as professionals capable of interpreting this technology from an educational perspective and utilising it for instructional purposes. Otherwise, technological transformation may become a source of pressure rather than an opportunity for teachers. In this context, the present study demonstrates that the use of artificial intelligence in education cannot be addressed through a one-dimensional assessment; it requires a balanced and conscious management process that takes both opportunities and risks into account. As emphasised by Alanoğlu and Karatabak (2020) and Coşkun and Gülleroğlu (2021), the effectiveness of artificial intelligence in education depends on a planned, ethical and informed process of use. Consequently, a more appropriate approach would be for education systems to reposition artificial intelligence within a framework that enriches teaching processes, safeguards the quality of learning, and provides fair opportunities for all students.

6.1 Recommendations

Based on research findings, the following recommendations can be made.

- To enable teachers to use artificial intelligence effectively and thoughtfully, practice-based, ongoing professional development programmes can be planned; support programmes can be created that provide guidance on direct classroom applications and include lesson plan examples, assessment tools and content based on real classroom experiences.
- Clear, understandable and actionable frameworks regarding the use of artificial intelligence at the school level can be established; it can be determined to what extent students can utilise artificial intelligence in their homework, projects and assessment processes, in which situations restrictions should be imposed and how its use can be made transparent.
- To mitigate risks to the quality of learning, a process-oriented assessment approach can be strengthened in teaching processes rather than product-oriented approaches; oral explanations, performance-based tasks and process monitoring practices can be utilised more effectively.

- Taking into account the impact of technological disparities between schools and among students within the same school on the learning process, support mechanisms can be developed to ensure all students have access to basic digital tools.
- Systematic awareness-raising initiatives regarding data security and ethical use can be carried out for both teachers and students.

Taking into account the evolving role of teachers in the context of artificial intelligence, teachers can be supported in adapting to a role that guides the learning process and fosters students' critical thinking. By establishing collaborative learning communities within the school, teachers should be encouraged to share their experiences, thereby helping to disseminate best practices.

Conflict of Interest Statement
The author declares that there are no financial, institutional, or personal conflicts of interest that could have influenced the planning, conduct, analysis, interpretation, or reporting of this research.

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