

The Use of Artificial Intelligence in The Supervision of Education in Turkey

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ABSTRACT

With the advancement of technology, we have entered a digital age. In this context, artificial intelligence (AI), which has become an integral part of people's lives, is drawing attention with its specific and significant applications. Consequently, it is evident that AI, used in every aspect of human life, has evolved into a viable option in critical fields such as education. Artificial intelligence has evolved beyond merely facilitating the flow of information; it is now capable of assuming a supervisory role by analyzing various data or mechanisms. Consequently, the use of artificial intelligence software and systems is increasingly observed in the context of educational supervision. Given the significance of the triangle formed by education, technology, and artificial intelligence, this study focuses on the use of artificial intelligence in educational supervision. In this context, the opportunities provided by artificial intelligence in educational supervision and the risks that arise have been examined in detail. Based on these examinations, significant findings and conclusions related to the subject have been obtained.

Keywords: Artificial Intelligence, Educational Supervision, Artificial Intelligence in Education, Artificial Intelligence in Educational Supervision.

INTRODUCTION

With the advancement of technology today, we have entered an entirely new era. Consequently, alongside the effects of the digital age driven by technology, we observe that applications such as artificial intelligence have become integrated into human life.

Beyond its structure that mimics the human brain, artificial intelligence is attracting attention today with its numerous applications. In particular, while artificial intelligence is frequently used in fields such as education and instruction, its use as a supervisory mechanism is also a possibility. For this reason, artificial intelligence can be preferred not only as an encyclopedia but also as a control mechanism and supervisory tool for many important systems or structures.

Traditional monitoring mechanisms or approaches often rely on human labor and methods that emerge from limited data analysis. However, thanks to artificial intelligence, the rapid, consistent, and objective analysis of large datasets has become possible. In this context, the use of artificial intelligence in educational oversight enables the monitoring, evaluation, and analysis of student performance, the comparison of school performance, and the early detection of various issues and risks. Consequently, artificial intelligence stands out as a strategic tool that facilitates the execution of oversight processes in a far more effective and data-driven manner.

It is believed that artificial intelligence has become significantly more important due to the various advantages it offers in the context of educational supervision. This is because the level of development of technology and artificial intelligence is advancing every day, and it is anticipated that artificial intelligence will become a tool used across all fields in the future. For this reason, the research focuses on the use of artificial intelligence in educational supervision, and all relevant details have been analyzed through literature sources.

The aim of the study is to analyze the effects created by artificial intelligence, which adapts to human life through technology, in educational supervision. Consequently, the study aims to examine the phenomenon of education, the roles of artificial intelligence in educational supervision, and the benefits and risks it provides. Among the study's sub-objectives is to contribute a significant information source to the literature on the subject.

Problem:

In the Turkish education system, the supervision of educational institutions holds a crucial position in ensuring these institutions operate in accordance with their objectives, determining whether planned goals are achieved, and enabling the implementation of preventive and developmental measures if necessary. For this reason, the supervision of educational institutions in Turkey is also a matter of significant importance. It has become an undeniable reality that the concept of artificial intelligence, which has emerged in recent years and impacts numerous fields, is not unrelated to the field of educational supervision. Upon examining studies in this area, it has been observed that the use of artificial intelligence in educational supervision holds significant critical importance, yet there is a lack of sufficient research on this topic. For the reasons outlined above, there is a need for this study.

Objective:

The purpose of this study is to reflect the current state of artificial intelligence use in educational supervision - a field holding a significant place in the Turkish education system - and to highlight the importance of this topic by presenting the results of existing studies.

Method:

This study was designed as a conceptual model. The topic of educational supervision holds a very important place in the Turkish education system. The supervision of educational institutions is indispensable for ensuring these institutions operate in accordance with their objectives, determining whether pre-established goals have been achieved, and implementing preventive measures when necessary. It cannot be said that the use of artificial intelligence—a relatively new concept that is rapidly being adopted across many fields—in educational supervision has been sufficiently researched or discussed. From this perspective, this article serves as an introduction to the concept of using artificial intelligence in educational supervision. In this context, the article explains the concept of using artificial intelligence in educational supervision and introduces related concepts.

The Concept of Education

Education is viewed as the most important tool used to help individuals adapt their innate positive traits and talents through new knowledge, thereby attaining an identity that is beneficial for both themselves and society. For this reason, the concept of education assists

individuals in acquiring the necessary knowledge and skills to lead a higher quality of life. At the same time, education aims to produce values capable of sustaining and perpetuating society's existence or to preserve existing values. Consequently, it also assumes the responsibility of harmonizing society's old and new values to ensure they are reflected in a coherent manner within the community (Balçı, 2004).

The word "education" derives from the Latin term "educare." In terms of its semantic equivalent, the word, which means "care and placement," is translated in English as "educate" and in Turkish as "to teach, to discipline, and to raise" (Şimşek, 2012).

The concept of education is primarily viewed as a process of acquiring knowledge and learning, grounded in a very broad perspective. Consequently, formal learning in schools and universities is cited as one of the most common forms of education. At the same time, self-directed learning and life experiences can also be classified as education. For this reason, it is anticipated that every society places importance on the education of people of all ages, and that acquiring new ideas and skills will lead people to better places. Consequently, it is emphasized that the concept of education is even more significant from a societal perspective, as it is believed that people will contribute to society and others. Education is viewed as a multidimensional structure encompassing personal, social, cultural, and political dimensions that continue throughout one's life. For this reason, it is presented as a decisive factor in determining a nation's destiny. Consequently, the highly qualified workforce that society requires can only be provided through quality education. Therefore, education undertakes the task of cultivating the "information age individual"—one who thinks positively, is open to learning, is solution-oriented, and focuses on solutions rather than the causes of problems (Kandemir, 2015, p. 24).

Numerous important definitions have been proposed regarding education. Consequently, education is considered one of the core concepts of the socialization process. Within this process, the individual becomes aware of all the social and cultural teachings of both themselves and the society in which they live. John Locke expressed the idea that a person's mind is like a blank slate at birth and that one acts based on the knowledge inscribed on that slate through education (Cihan, 2010, p. 173).

Another definition of education describes it as a system that determines a society's moral norms and its political and economic structure, and even ensures the continuation of social order (Buluç, 1997, p. 11).

People's encounter with education begins from the moment they are born. For example, the concept of "respect" is interpreted differently by every society. Consequently, the fact that it varies from culture to culture and must be taught to individuals stands as one of the clearest examples of education (Çetin, 2022, p. 4).

In the definition of education provided by Mahmut Tezcan, it is described as a process that benefits the development of a person's personality, is based on it, and helps them acquire the necessary knowledge, behaviors, and skills to prepare for adult life (Tezcan, 1981, p. 4).

In Tyler's definition of education, it is described as the process of changing an individual's behavioral patterns. In another definition by Ertürk, education is defined as the process of facilitating learning through the experiences individuals gain in their behaviors.

In Fidan's definition of education, a brief and clear description is provided as the process of raising people according to various objectives (Sönmez, 2012).

In Yıldırım's description of education, it is characterized as a systematic interaction aimed at creating specific differences in an individual's behavior regarding personal traits considered important, such as skills, understanding, interest, knowledge, attitude, and character (Yıldırım, 1999).

Another significant definition of education in the literature generally describes it as the sum of processes through which an individual develops their attitudes, behavioral patterns aligned with positive values, and capabilities within the society in which they live. Therefore, when examining definitions of education, three fundamental characteristics can be identified. The first of these is that education occurs within a process. Second, it is observed that education creates characteristics that generally influence the individual in a positive direction. Third, it is noted that education takes place in accordance with the conditions and rules of the society in which the individual lives (Aydın, 2015, p. 233).

The Concept of Audit

The term "control" is translated as "audit" in English, while its Turkish equivalents include "to listen" or "to examine." According to the definition provided by the Turkish Language Institution, it is defined as examining or verifying whether a task has been performed appropriately and correctly (Örenay, 2005).

Another definition of the concept of audit describes it as the analysis, control, or examination of whether a particular activity is carried out in accordance with established conditions and methods. Consequently, many definitions of audit feature similar descriptions (İnci, 2012).

Audit exists as a functional characteristic arising from situations that do not comply with standards due to the presence of certain risks. Consequently, the audit process contributes to ensuring control by acting as a defense mechanism (Association of Certified Public Accountants, 2004).

Audit is also described as a technical control mechanism that supports managers by analyzing the conditions related to services within an organization or the resources provided to facilitate the delivery of those services. Consequently, the primary reason audit is viewed as a technical mechanism stems from its use to provide an effective analysis of an organization's operations, resources, and activities (Botha and Boon, 2003, pp. 23–38).

Today, audit activities generally attract attention with new scopes and functions. Consequently, it is observed that audit activities have expanded to a much broader scope. These are as follows (Köse, 2000);

- Program
- Plan
- Examination of projects in terms of efficiency and effectiveness
- Demonstration of different techniques
- Promoting the widespread adoption of good management practices
- Identifying long-term interests
- Analysis of environmental impacts

Through auditing, the process becomes more transparent regarding whether operations within an organization are conducted in compliance with relevant criteria after being identified in advance. Therefore, the primary purpose of auditing is to reveal the current state and facilitate the achievement of desired outcomes. For this reason, auditing is also described or defined as the process of verifying compliance with established standards. While auditing activities initially focused solely on matters such as compliance and regularity, new techniques and methods have been developed over time (Bozkurt, 2022, pp. 41–58).

The Necessity of Using Artificial Intelligence in Auditing

Along with the technological advancements of today, efforts to optimize and simplify people's daily lives are noteworthy. In particular, companies are significantly reducing their workforce by leveraging automation and digitalization. Consequently, all procedures—such as data storage and data processing—are carried out with the aid of computers. Data processing in a computer environment offers important capabilities, such as diversifying information for the user. Consequently, data traffic has become much more diverse and intense. Controlling the resulting big data has become significantly more challenging than in the past. At this point, auditors generally focus on analytical management techniques compared to the past. It is anticipated that if auditors view the ongoing automation and digitalization processes from a different perspective, this situation could turn into a significant advantage for them. Consequently, since records and documents are stored in digital environments, various AI-supported algorithms can be utilized to conduct an audit with an enhanced assurance level by leveraging AI (Tas and Mert, 2019, p. 66).

Areas of AI Application in Auditing

The use of artificial intelligence in audit work is showing a rapid increase. Today, it is observed that the Big Four audit firms have designed their operations to facilitate audit work through artificial intelligence applications. These firms are as follows (Deloitte, 2018);

- EY
- Deloitte
- KPMG
- PwC

Deloitte's AI application, called Deloitte Argus, can scan credit agreements companies have with banks, sales contracts audited companies have signed with customers, and contracts signed with firms they buy from or sell to. Consequently, the information obtained from the scan can be analyzed using key data entered into the program by the auditor. Additionally, the program generates reports for the auditor based on the data. With EY's AI software, combined with cloud-based data processing techniques and the Internet of Things, benefits such as support in reducing audit hours have become possible (EY, 2017). In the field of audit, artificial intelligence is being utilized in many sectors such as agriculture, trade, the service sector, and education. In particular, there is a desire to leverage AI audits because significant benefits are anticipated in the education sector (Luo et al., 2018, pp. 850–856).

Artificial Intelligence in Educational Evaluation

Educational evaluation encompasses the process of analyzing, guiding, and improving instructional activities conducted in educational institutions or organizations in accordance with specific objectives. Therefore, the evaluation process aims not only to monitor but also to support improvement and professional development. Consequently, while the human factor takes center stage in traditional evaluation approaches, subjective assessments can influence the process (Bursalıoğlu, 2015).

It is observed that artificial intelligence is being utilized in various aspects of education. Among these areas, educational supervision stands out as a topic receiving significant attention. The applications of artificial intelligence in certain educational supervision contexts are as follows (Ahmad et al., 2020, p. 8);

- Grading and assessment
- Predicting student absenteeism and school dropout rates
- Predicting student performance
- Personalized instructional analyses and solution recommendations
- Sentiment analysis
- Recommendation systems
- Smart education systems
- Classroom monitoring
- Smart school
- Data collection
- Creating educational profiles based on courses, subjects, and educational assessments
- School evaluation and management
- Monitoring and analysis systems

Given the above uses of artificial intelligence, it is expected that in the near future, AI will play a much more prominent role in classroom management and school administration. Consequently, it is anticipated that AI will become much more dominant in educational oversight and all areas related to education in the coming years.

When viewed from perspectives such as personalized instruction and teaching assistants, as well as the diversification of standardized curricula and teaching techniques that are uniformly applied to all students, it becomes clearer why artificial intelligence is sought after in the field of education. Due to this priority, the use of applications that analyze students, identify emotions and learning methods, as well as virtual interactive teachers and personalized learning systems, has become possible. At the same time, AI-based systems such as smart education systems enable both the personalization of instruction and data-driven teaching and guidance (Çetin and Aktaş, 2021, pp. 4229–4231).

The adoption of artificial intelligence in educational supervision enables a data-driven and continuous approach to supervision. Furthermore, by analyzing data such as school performance, teacher performance, and student demographics using AI algorithms, risky situations can be identified in advance. As a result, supervision processes are conducted in a much more objective and systematic manner. AI-supported monitoring systems provide inspectors with decision-support mechanisms. At the same time, benefits such as time savings are clearly evident. Beyond these benefits, the comparability and traceability of

monitoring results directly support institutional development (Karslı and Yıldırım, 2020, pp. 345–370).

AI studies in education are not limited solely to the effects on learning. Research on its active use in other areas is also ongoing. In this context, the areas where development efforts are ongoing and the techniques aimed at implementing these areas are presented in Table 1.

Table 1: Application Areas and Techniques of Artificial Intelligence in Education

Artificial Intelligence Application Area	Methods and Approaches Used
Assessment of Student and School Performance	Adaptive learning models, personalized learning approaches, academic data analysis
Assessment and grading of assignments and exams	Image processing techniques, computer vision applications, predictive analytics systems
Personalized intelligent teaching systems	Data mining, knowledge-based inference methods, student and learning process analyses
Smart school applications	Face and voice recognition technologies, smart laboratory solutions, augmented and virtual reality (AR/VR) systems, environmental sensing technologies
Online and remote mobile learning	Student-specific data analysis, virtual and personalized learning assistants, real-time monitoring and instant feedback mechanisms

Source: (Chen et al., 2020, pp. 75264–75278)

Advantages and Disadvantages of Artificial Intelligence in Education

It is observed that the adaptation of artificial intelligence to education is at lower levels compared to other fields. However, with ongoing developments, it is anticipated that this level will continue to rise. In particular, it is expected that the main stakeholders in education will be directly impacted by artificial intelligence in the near future. While this impact may provide certain advantages to stakeholders, it is also anticipated to bring various disadvantages. Therefore, the advantages and disadvantages that AI would provide when used by the four main stakeholders in education— educational institutions, teachers, parents, and students—are presented in Table 2 (Çetin and Aktaş, 2021, p. 4229).

Table 2: Advantages and Disadvantages of Artificial Intelligence in the Context of Education Stakeholders

Stakeholder	Potential Contributions	Potential Limitations
Educational Institution	More accurate analysis of students' individual characteristics, support for school safety, more objective assessment and evaluation processes, enhanced digital learning environments, development of systems to protect student data, increased efficiency in learning processes, and provision of opportunities for personalized instruction.	Lack of trust in new technologies, potential challenges in measuring students' creativity during assessment processes, increased difficulty in classroom management, and risks of technical failures or cyberattacks.
Student	The ability to objectively track the learning process, improved learning quality in distance education, adaptation to learning with new technologies, and the ability to access learning materials independently of time and place.	Potential loss of motivation during the learning process, and a decrease in teacher–student communication and interaction.
Teacher	Facilitating student tracking, accelerating content and assignment preparation processes, providing continuous feedback, increasing objectivity in assessment, and contributing to the monitoring of teacher performance while preserving strengths and developing weaknesses.	Increased expectations regarding teachers' professional competencies, and concerns that, in some cases, the teacher's role may take a backseat.
Parent	Real-time updates on the student's progress, more active participation in the learning process, access to diverse learning opportunities, and facilitating	A lack of interaction due to reduced face-to-face communication and the
	access to education for socio economically disadvantaged groups.	potential for misunderstandings arising from this.

Source: (Osetskyi et al., 2020, pp. 574–584)

Advantages and Disadvantages of Artificial Intelligence in Educational Supervision

The use of artificial intelligence in educational supervision also presents numerous advantages and disadvantages. Some of these advantages are as follows (UNESCO, 2021);

- Increased objectivity
- Reduction in human error and time savings
- Effective analysis of large datasets
- Ensuring the continuity of monitoring processes
- Early detection of problems through early warning systems

Although artificial intelligence offers significant advantages in educational oversight, it also brings certain ethical and legal issues. Consequently, the disadvantages created by artificial intelligence in educational oversight are as follows (Floridi et al., 2018, pp. 689–707);

- Data privacy
- Algorithmic bias
- The marginalization of the human factor
- Ethical principles
- The risk of making incorrect decisions due to the absence of emotions and feelings
- The risk of flawed assessments going unnoticed
- Weakening of instructors' communication

CONCLUSION AND DISCUSSION

Within the scope of this research, significant literature sources related to the use of artificial intelligence in educational supervision were reviewed, and highly significant results were obtained. Among the key findings in this context is the importance of the supervision mechanism. In this regard, the opportunities offered by the use of artificial intelligence in educational supervision processes and the limitations it entails were examined in light of studies in the literature. The findings revealed that AI-supported systems make significant contributions to data collection, analysis, and decision-support processes in educational supervision. At the same time, it was noted that traditional supervision approaches typically rely on limited observation periods and subjective evaluations. For this reason, it is anticipated that AI applications will offer a much more objective, continuous, and comprehensive supervision capability.

Since oversight involves monitoring a process, it is believed that systems like artificial intelligence will make the oversight process easier and more practical. In particular, it has been concluded that the use of artificial intelligence in educational oversight will provide numerous advantages. It is anticipated that AI can be utilized in educational oversight to address human error, save time, enable the analysis of big data, conduct performance analyses, and identify errors or issues related to educational institutions in advance.

Within the scope of this study, research reviewed in the literature revealed that artificial intelligence strengthens audit processes in areas such as monitoring teacher and school performance, analyzing student achievement, and predicting absenteeism and dropout rates. Furthermore, with the integration of big data analysis and predictive models, oversight processes are no longer limited to merely analyzing the current situation.

Consequently, by enabling the early identification of potential risks, this contributes to transforming educational oversight into a more preventive and guidance-oriented structure.

In addition to the positive effects of artificial intelligence in the field of education, its negative effects are also among the significant findings revealed in this study. Given that artificial intelligence is a digital entity, it is considered possible that certain ethical issues, risks of miscalculation, data privacy concerns, and the marginalization of people may arise within the scope of educational oversight. For this reason, it is recommended that the use of artificial intelligence in educational supervision be managed with human oversight and that inspections be conducted in an integrated manner with human involvement, rather than through a fully digital process. Additionally, it is advised that all legal and technical measures be implemented while paying close attention to aspects such as data privacy and ethical principles.

Based on the findings of the study, it is anticipated that using artificial intelligence as a tool to support auditors—rather than having it completely replace the human factor in educational auditing—would be far more appropriate. Therefore, it has been determined that the quality of the audit process can be enhanced by having AI handle routine data processing and analysis tasks, while interpretation, guidance, and professional decision-making processes are carried out by human auditors. In this context, it is recommended to adopt a hybrid educational audit system or model based on human-machine collaboration.

REFERENCES

- Ahmad, K., Iqbal, W., Hassan, A., Qadir, J., Benhaddou, D., Ayyash, M. & Fuqaha, A., (2020). Artificial intelligence in education, *A panoramic review*, 1-51, doi:10.35542/osf.io/zvu2n.
- Aydın, M., (2015). *Eğitim, Kurumlar Sosyolojisi*, Açılım Kitap, İstanbul.
- Balcı, B., (2004). *Milli eğitime bağlı meslek okullarında görev yapan öğretmenlerin iş tatmini*, Marmara Üniversitesi Fen Bilimleri Enstitüsü Yüksek Lisans Tezi, İstanbul.
- Botha, H. & Boon, J. A., (2003). The Information audit: Principles and guidelines, *Lbri*, 53, 23-38.
- Bozkurt, P., (2022). *Kurumsal yönetiminde denetim komitesi rolünün Türk kamu yönetiminde iç denetim tarafından karşılanabilirliği*, Denetim Yayınları, 24: 41-58.
- Buluç, B., (1997). İlköğretim İkinci Kademe Okullarda Eğitimde Fırsat ve İmkan Eşitliği, *Kuram ve Uygulamada Eğitim Yönetimi*, 9(9): 11-22.
- Bursalıoğlu, Z., (2015). Eğitim Yönetiminde Teori ve Uygulama, *Pegem Akademi*, Ankara.
- Chen, L., Chen, P. & Lin, Z. (2020). Artificial intelligence in education: A review, *IEEE Access*, 8, 75264-75278.
- Cihan, M., (2010). John Locke ve Eğitim, *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 7(1):173-178.
- Çetin, M. & Aktaş, A., (2021). Yapay Zekâ ve Eğitimde Gelecek Senaryoları, *OPUS International Journal of Society Researches*, 18: 4225-4268.
- Çetin, S., (2022). *Eğitimde Fırsat Eşitliğinde Bir Toplumsal Etmen: Cinsiyet*, Nevşehir Hacı Bektaş Üniversitesi Sosyal Bilimler Enstitüsü Yüksek Lisans Tezi, Nevşehir.
- Deloitte, (2018). 16 AI Projects from Deloitte Practical Cases of Applied AI,

- <https://www2.deloitte.com/content/dam/Deloitte/nl/Documents/innovatie/deloitte-nl-innovatie-artificial-intelligence-16-practical-cases.pdf>, Erişim Tarihi: 30.01.2026.
- EY, (2017). EY Scaling the Use of Drones in the Audit Process, <https://www.ey.com/gl/en/newsroom/news-releases/news-ey-scaling-the-use-of-drones-in-the-audit-process> Erişim Tarihi 30.01.2026.
- Floridi, L., Cowls, J., Beltrametti, M., Chatila, R., Chazerand, P., Dignum, V., Luetge, C., Madelin, R., Pagallo, U., Rossi, F., Schafer, B., Valcke, P. & Vayena, E., (2018). AI4People-An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles and Recommendations. *Minds Mach (Dordr)*, 28(4): 689-707.
- Hesap Uzmanları Derneği, (2004). Denetim İlke ve Esasları, 1. Cilt, 3. Baskı, *Hesap Uzmanları Derneği*, İstanbul.
- İnci, M. U., (2012). *İşletmelerde İç denetim süreci ve tarım-hayvancılık sektöründe bir uygulama: Harran ovası besi ve tarım ürünleri A.Ş. örneği*, Harran Üniversitesi Sosyal Bilimler Enstitüsü Yayınlanmamış Yüksek Lisans Tezi, Şanlıurfa.
- Kandemir, Y., (2015). *Devlet Okulu Öğretmenlerinin Özel Okullara İlişkin Tutumlarının İncelenmesi*, Yeditepe Üniversitesi Eğitim Bilimleri Enstitüsü Yüksek Lisans Tezi, İstanbul.
- Karşlı, M. D. & Yıldırım, A., (2020). Eğitim yönetiminde dijitalleşme ve denetim, *Kuram ve Uygulamada Eğitim Yönetimi*, 26(2): 345-370.
- Köse, H. Ö., (2000). *Dünyada ve Türkiye’de Yüksek Denetim*, İstanbul Üniversitesi Sosyal Bilimler Enstitüsü Doktora Tezi, İstanbul.
- Luo, J., Meng, Q. & Cai, Y., (2018). Analysis of the Impact of Artificial Intelligence Application on the Development of Accounting Industry, *Open Journal of Business and Management*, 6: 850-856.
- Tas, O. & Mert, H., (2019). An application of artificial intelligence on auditing. *Press Academia Procedia (PAP)*, Volume: 9, p. 65-68.
- Osetskyi, V., Vitrenko, A., Tatomyr, I., Bilan, S. & Hirnyk, Y., (2020). Artificial intelligence application in education: Financial implications and prospects, *Financial and Credit Activity: Problems of Theory and Practice*, 2(33), 574-584.
- Örenay, H., (2005). Kamuda Denetim, *Maliye Bütçe Kontrolörleri Derneği Yayınları*, Ankara.
- Sönmez, V., (2012). *Eğitim Felsefesi*, 11. Baskı, Anı Yayıncılık, Ankara.
- Şimşek, S., (2012). *Türk eğitim sisteminin yapısal özellikleri bağlamında 1980 sonrasında Türkiye’de eğitim iktidar ilişkileri*, Afyon Kocatepe Üniversitesi Sosyal Bilimler Enstitüsü Yüksek Lisans Tezi, Afyonkarahisar.
- Tezcan, M., (1981). Eğitim Sosyolojisine Giriş, *Ankara Üniversitesi Eğitim Fakültesi Yayınları*, Ankara.
- UNESCO, (2021). Artificial intelligence and education: Guidance for policy-makers, *UNESCO*, Paris.
- Yıldırım, A., (1999). Nitel Araştırma Yöntemlerinin Temel Özellikleri ve Eğitim Araştırmalarındaki Yeri ve Önemi, *Eğitim ve Bilim*, 23(12).