

## Understanding the Impact of Artificial Intelligence Literacy on University Students Career Planning: An Empirical Study

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### Abstract

The subject of artificial intelligence, which we encounter in almost every aspect of life, is one of the most discussed topics, especially in business life. In the era of artificial intelligence we are in, people have to know the competencies required by this age. The present research examines the influence of artificial intelligence literacy on career planning. Data obtained from 361 students at Bolu Abant İzzet Baysal University aim survey method were analyzed with Structural Equation Model-Path Diagram using SPSS 25- AMOS programs. According to the findings, the awareness dimension of AI literacy has a positive and significant effect on students' professional awareness and the adequacy of education. However, career awareness has no significant effect on career beliefs and the accuracy of choices. The usage dimension shows negative and significant effects on students career awareness, professional awareness, career beliefs, and the adequacy of education; the accuracy of choices is unaffected. The evaluation dimension revealed negative and significant effects in all sub-dimensions. This indicates that students experience negative effects in career planning due to knowledge gaps in the critical evaluation process of AI. The ethics dimension, however, shows a positive and significant effect in all sub-dimensions. The ethical approach contributes to students making informed and positive decisions in career planning. In conclusion, the impact of AI literacy on career planning varies according to dimensions. The awareness and ethics dimensions have a positive effect, while the usage and evaluation dimensions have a negative effect in some sub-dimensions. It is thought that AI literacy will significantly influence university students' conscious actions in career planning.

**Keywords:** career planning, artificial intelligence literacy, workforce transformation, university students.

**Gel Codes:** J24, J23, O33.

### Üniversite Öğrencilerinin Kariyer Planlamasında Yapay Zekâ Okuryazarlığının Etkisi: Ampirik Bir Araştırma

#### Öz

Hayatın neredeyse her alanında karşımıza çıkan yapay zekâ konusu iş hayatı başta olmak üzere tartışılan konuların başında yer almaktadır. İçerisinde bulunduğumuz yapay zekâ çağında insanlar bu çağın gerektirdiği yetkinlikleri bilmek durumundadırlar. Bu kapsamda, çalışmada, yapay zekâ okuryazarlığının kariyer planlaması üzerindeki etkisinin incelenmesi amaçlanmaktadır. Bolu Abant İzzet Baysal Üniversitesindeki 361 öğrenciden anket yöntemiyle elde edilen veriler SPSS 25 ve AMOS programlarıyla Yapısal Eşitlik Modeli-Yol Diyagramı ile analiz edilmiştir. Bulgulara göre, yapay zekâ okuryazarlığının farkındalık boyutu, öğrencilerin profesyonel farkındalığı ve eğitimin yeterliliği üzerinde pozitif ve anlamlı etki göstermektedir. Kariyer farkındalığı, kariyere yönelik inanç ve seçimin doğruluğu üzerinde ise anlamlı etkisi yoktur. Kullanım boyutu, öğrencilerin kariyer farkındalığı, profesyonel farkındalık, kariyere yönelik inanç ve eğitimin yeterliliği üzerinde negatif ve anlamlı etkiler göstermektedir; seçimin doğruluğu ise etkilenmemektedir. Değerlendirme boyutu, tüm alt boyutlarda negatif ve anlamlı etkiler ortaya koymuştur. Bu, öğrencilerin yapay zekâyı eleştirel değerlendirme sürecinde bilgi eksiklikleri nedeniyle kariyer planlamasında olumsuz etkiler yaşadığını göstermektedir. Etik boyutu ise tüm alt boyutlarda pozitif ve anlamlı etki göstermektedir. Etik yaklaşım, öğrencilerin kariyer planlamasında bilinçli ve olumlu kararlar almalarına katkı sağlamaktadır. Sonuç olarak, yapay zekâ okuryazarlığının kariyer planlamasına etkisi boyutlara göre değişmektedir. Farkındalık ve etik boyutları olumlu, kullanım ve değerlendirme boyutları bazı alt boyutlarda olumsuz etki yaratmaktadır. Kariyer planlamalarında, yapay zekâ okuryazarlığının üniversite öğrencilerinin bilinçli hareket etmelerine önemli düzeyde etki edeceği düşünülmektedir.

**Anahtar Kelimeler:** kariyer planlama, yapay zekâ okuryazarlığı, işgücü dönüşümü, üniversite öğrencileri.

**Jel Kodları:** J24, J23, O33.

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## **Introduction**

In this study, artificial intelligence literacy is considered not only as a technological competency but also as a conceptual tool related to career planning. Artificial intelligence, which causes significant changes in business life, brings great impacts on career planning. It enables people to identify their talents and make career planning in the right way. From the point of view of employers, artificial intelligence applications offer great benefits in finding suitable candidates and placing the person in the appropriate position. By analyzing data, artificial intelligence can reveal people's strengths and weaknesses through algorithms. The person who realizes their strengths and weaknesses demands jobs that are suitable for their skills in the business world. Thanks to this opportunity offered by artificial intelligence, people can make career planning in a more strategic and conscious way. Artificial intelligence has an impact in many areas, and today, people's knowledge of artificial intelligence literacy is a matter of discussion. It is thought that university students should be literate in the age of artificial intelligence and make career plans accordingly.

When people find suitable career opportunities for themselves, they are motivated to work in that position. In this case, it occurs advantageous results for the organization. Developing AI literacy is an important advantage for individuals in planning their careers. Artificial intelligence literacy allows people to understand the basics of artificial intelligence, to apply it and to think about how to use it in their lives. In career planning, artificial intelligence is not only limited to gaining technological skills, but also helps people to understand the direction in which the workforce will tend in the future and to develop themselves in this direction. The use of artificial intelligence in career planning increases productivity in the workforce and allows people to direct their professional development to more accurate points. In order for people to better understand the economic and social effects of artificial intelligence applications, artificial intelligence literacy should increase (Belahouaoui & Attak, 2024, p.193). At this point, artificial intelligence literacy is very important for people who don't work specialize in artificial intelligence to be able to communicate effectively in the future where artificial intelligence exists, to adapt to changing technology and to benefit from the opportunities that artificial intelligence will provide and to avoid its disadvantages.

Artificial intelligence literacy is the skills required for the effective use of artificial intelligence technologies (Yetişensoy et al., 2023; Wang et al., 2023). Artificial intelligence literacy, which seems to be a sub-branch of digital or technological literacy, is different from all types of literacy due to its potential. AI literacy emerges as a strategic issue in order to avoid and eliminate the disadvantages that artificial intelligence may cause. Therefore, it is essential to be AI literate in order to understand AI applications and use them effectively. How artificial intelligence, which transforms today's and

tomorrow's industry and business world, will change the way of doing business is one of the most discussed topics in the business world. At the same time, according to another discussion, artificial intelligence will affect the long-term career plans of young people. With the rapid change and development of technology, the areas of use of artificial intelligence are also becoming widespread. As a result, artificial intelligence creates new opportunities in many sectors. When planning a career in the age of artificial intelligence, it is necessary to consider some important points, especially high demand, industrial transformation, competitive advantage and innovation opportunities. The increasing need for experts and competent people in the area of artificial intelligence and the transformation it has made in many industries brings with it new career opportunities. The fact that it allows new ideas to emerge shows that we need to take into account the innovative opportunities it provides.

When the literature is examined, it is seen that studies on the relationship among artificial intelligence literacy and career planning, especially on educational technologies, digital literacy and vocational orientation, have increased. However, it is possible to say that this literature is quite limited in Turkey. International sources such as OECD (2021), UNESCO (2023) and Holmes et al. (2019) reveal that artificial intelligence has a important effect on people's career plans and professional adaptation processes. Career planning is an issue that is emphasized especially at university ages. In order to prepare students for the future, universities carry out various studies in this context. Today, the best examples are career centers. In this context, the literacy status of university students about artificial intelligence while realizing their career planning is among the issues that need to be emphasized in our age. In the developing and changing world, especially university-age students need to be knowledgeable about artificial intelligence literacy and be aware of this age when making career plans.

### **1. Conceptual Framework**

Developments in artificial intelligence started with the Dartmouth Conference in 1956. Today, significant progress has been made in areas like machine learning, profound learning and natural language processing. Artificial intelligence has brought about transformations in many fields such as health, education, transportation, etc. However, this study analyzes the impact of artificial intelligence literacy on people's career planning rather than its technological background. Recently, there has been a noticeable increase in the international literature on the relationship between digital competencies, AI literacy and career planning. Studies on educational technologies and digital literacy reveal that people's ability to understand, use and seriously evaluate artificial intelligence has an impact on career planning. It is emphasized that digital competence with its cognitive, technical and socio-emotional

framework has a transformative effect on educational processes. It is possible to say that artificial intelligence applications also contribute to students' self-regulation, motivation and academic success in educational processes (Ng, 2012; Belshaw, 2012; Luckin, 2018; Holmes et al., 2019). While performing career planning, career planning in the age of technology should be carried out in relation to incidental learning, self-efficacy and career adaptation competencies (Savickas, 2005; Krumboltz, 2009). However, since the literature in Turkey is limited, there is a need for more studies on applied AI literacy and career planning together.

Artificial intelligence is described as the science or engineering of developing human-like smart machines and computer programs. Educational institutions have also been affected by the increasing interest in artificial intelligence in our digitalizing world. Artificial intelligence applications are used in every field as adaptive or personalized intelligent learning systems. Artificial intelligence applications are considered as applications that affect students abilities by enabling them to learn (Arslan, 2020). In Turkey, interest in artificial intelligence technology, which plays an active role in learning, problem solving and decision making by imitating human intelligence, has increased and various applications have been developed. With the common use of artificial intelligence applications, it is noted that it will affect the career planning of university students who will play a significant role in the future. It is obvious that the interest and knowledge of university students in the aforementioned artificial intelligence applications is significant in our age of artificial intelligence. Therefore, it is significant to have acquired AI literacy skills for individuals and societies to be successful. It is the responsibility of the individual to make the best use of artificial information technology. The dissemination of AI literacy at the personal and social level will help to direct technological developments in the right way, as well as to avoid possible negative effects that may occur in the age of artificial intelligence. The level and speed at which artificial intelligence skills spread will have a direct impact on the success of every field in which they are utilized in the future. Artificial intelligence applications are not only a technological innovation, but also lead to a more comprehensive process of change in education where teaching techniques are redesigned. Artificial intelligence applications make significant contributions in creating personal learning scenarios, producing content according to learning speed, feedback and data analysis of the learning process. It is emphasized that artificial intelligence-supported systems can also be used in arrangements for students' ability to understand in their educational processes. It will provide a great advantage in organizing teaching strategies in a way that students will understand. The data obtained within the scope of learning analytics will help the teacher to understand the strengths and weaknesses of the student. The teacher will move to the role of being a strategic manager in the teaching process, not

just a transmitter of information (Luckin, 2018). Processes such as the automatic creation of teaching materials and the realization of exams and assessments with the support of artificial intelligence help to reduce the workload of the teacher and help to ensure objectivity. It is emphasized that artificial intelligence applications will help student motivation and will also improve self-regulation skills (Holmes et al., 2019).

OECD (2021) reports highlighted the strategic role that AI can play in teachers' decision-making. Not only in terms of teaching, AI solutions are supported in many areas from curriculum development to educational leadership. In addition to being able to produce multilingual and inclusive content, it makes it possible to shape the materials used according to the interest level of the student. This part is of big importance with regard to access to education. UNESCO (2023) draws attention to artificial intelligence and its applications from an ethical perspective, emphasizing the need to set clear rules on issues such as data security, algorithmic biases, human control in decision processes. In this context, AI systems utilized in education should be transparent, controllable and in line with pedagogical principles. Within all these developments, it argues that artificial intelligence in education should be addressed not only from a technical perspective, but also from a pedagogical and ethical perspective. The European Digital Competence Framework (DigComp) defines digital competence in five key areas: knowledge literacy, connection, content production, security and problem solving. It emphasizes that these competencies are directly about to the career development of individuals in the age of artificial intelligence. In this context, it is important for people to understand the scope and ethical responsibilities of these tools as well as their ability to use artificial intelligence tools (UNESCO, 2023; OECD, 2021). In addition to technical skills, AI literacy encompasses a number of perspectives such as strategic decision-making, digital identity construction and lifelong learning.

With the acceleration of digital transformation processes, artificial intelligence applications in education have caused some changes in both curriculum and teaching methods. Tracking student achievement, predictive analysis and evaluation, personal learning methods support educators' decision-making processes. Luckin (2018) focuses on the effect of using AI applications in training on learning analytics, student motivation and self-regulation skills, while Holmes et al. (2019) emphasize how these technologies reshape pedagogical design. However, people need to develop not only the capability to use AI, but also competencies such as ethical evaluation, critical thinking and digital responsibility. Ng (2012), discusses digital competencies in terms of technical, cognitive and socio-emotional dimensions and argues that these three dimensions need to be developed in a holistic manner in order for people to continue their meaningful and safe existence in the digital environment.

Similarly, Belshaw (2012) examines the competence of individuals to both use and make sense of technology by presenting eight basic elements of digital literacy.

In meta-synthesis studies on AI, it is emphasized that conceptual clarity, ethics, awareness and implementation areas need to be unified with educational policies (Mustafa et al. 2024). In order to reveal educators' attitudes towards AI, analyses have been conducted on the cognitive, pedagogical and managerial dimensions of the process of acceptance of these technologies (Kizilcec, 2024). For students, learning environments supported by artificial intelligence increase their sense of self-efficacy and help them make more informed choices in their career planning (Bandura, 1997). It is likely to say that people with high digital competence can use such technologies more ethically and effectively. Research shows that these individuals are more advantageous in terms of career planning (Zhai et al., 2024; Ocen et al., 2025). People generally create a career planning for themselves as a result of the knowledge and abilities they acquire during their education processes and the feedback they receive from experienced people. Career planning is an approach that starts at the education stage and continues to develop throughout the education process and is created by determining career choices. It offers a great opportunity to understand the compatibility between the must of the job and the skills and capabilities of the individuals (Wei et al., 2021).

The development of technology, the rise in the level of education, the quality of the work done and many changes in the needs of organizations have made the concept of career more important and caused career development and planning issues to attract attention. In career planning, which is an uninterrupted process, the important part of this process is to find the right location at the right time as a result of one's education, work experience and individual relationships. People's desire to move to higher positions by developing their existing skills is possible with a good career planning. Career planning covers the entire process from choosing a profession to retirement, including promotions after choosing that profession or the process of turning to a different career. Correct and appropriate career planning will lead to positive results both in the career of the individual and in the development phase of the organization and will lead to productivity.

AI literacy refers to the capability to use technological know-how as well as the ability to use information meaningfully and effectively. AI literacy requires an understanding of the basic discipline of AI, algorithms and data analysis. People should be aware of the ethical and social issues that may arise when using AI. People with AI literacy not only have the ability to evaluate AI's learning mechanisms, decision-making processes and outcomes, but also question the potential of AI and consider its social and ethical responsibilities. Education and learning programs, experience and practice, and social awareness are used to develop AI literacy. Schools, universities and online

platforms can help people increase their knowledge in AI by offering basic training in AI and data science. By using AI-based applications, people can both improve their theoretical knowledge and understand the functioning of artificial intelligence. In this way, they gain hands-on experience. Governments and non-governmental organizations should organize campaigns to raise social awareness about artificial intelligence, which is a social responsibility, and communicate the possible effects and ethical dimensions of this technology to the society.

A systematic review by Liang et al. (2025), analyzed in detail the effect of AI on curriculum design, teaching and assessment methods in higher education. The researchers reviewed a large number of theoretical and empirical studies on AI in the last decade and provided an overview of how it has reshaped learning processes. Mustafa et al. (2024), emphasized the ethical, methodological and interdisciplinary shortcomings of the field, highlighting that AI applications are not yet conceptually mature. They state that this situation creates uncertainties in policy making and implementation. Ocen et al. (2025), using a combination of systematic content analysis and bibliometric methods, mapped the opportunities and challenges facing AI-enabled educational technologies in both theoretical and practical terms. The study is important as it visualizes the evolution of the field and research trends. Kizilcec (2024) examined teachers' attitudes towards artificial intelligence-supported tools within the framework of psychological acceptance models. He revealed how factors such as managerial support, trust in technology and professional autonomy affect this process. Chen et al. (2023) tested the effects of chatbot and generative artificial intelligence (GenAI) tools on student achievement, interaction and engagement in the classroom environment with an experimental approach. They concluded that these technologies increase students motivation to learn, but pedagogical design shortcomings create limiting effects on learning outcomes. Zhai et al. (2024) argued that excessive trust on AI applications can make way cognitive superficiality, a lack of motivation, and an externalization of responsibility for learning in students. All these studies reveal that AI is not only a technical innovation in education but also a multi-layered transformative force with pedagogical, ethical, and administrative dimensions.

## **2. Methods And Findings**

### **2. 1. Ethical Permissions for The Research**

In this study, all the rules specified in the "Higher Education Institutions Scientific Research and Publication Ethics Directive" were followed. None of the effects specified in the second section of the directive, "Actions Contrary to Scientific Research and Publication Ethics", were carried out. Ethics committee permission information; Approval for this study was obtained from the Bolu Abant

İzzet Baysal University Human Research in Social Sciences Ethics Committee (Protocol No: 2024/470) with the decision numbered 2024/12 and dated 29.11.2024.

## **2.2. Introduction of The Subject**

In the age of artificial intelligence that we are in, people need to know the competencies and skills that this age requires. Understanding the requirements of the age of artificial intelligence is only possible by adopting/learning artificial intelligence literacy, using artificial intelligence, and being able to adapt to the changes that this age will bring. The university period is a period when career planning is decided and the implementation phase is attempted. The impact of artificial intelligence is important when we carry out our career planning in the age of artificial intelligence that we are in. Therefore, the impact of artificial intelligence literacy on career planning during university years was investigated.

## **2.3. Universe and Sample of The Research**

The universe of the research: University students. Since the number of university students couldn't be determined during the period when the research was conducted, the sample size was determined as 361 students. The mentioned sample has the ability to represent the universe at a 95% confidence interval (Gürbüz & Şahin, 2018). Because of the inability of reaching the entire universe, the ease sampling method was chosen from random sampling methods and Bolu Abant İzzet Baysal University students were included in the survey form and data were collected.

## **2.4. Hypotheses and Model of The Research**

### **Hypotheses of The Research**

H1: Artificial intelligence literacy and its sub-dimensions have a statistically positive and significant effect on career planning and its sub-dimensions.

H1a: Awareness positively and significantly affects career awareness, professional awareness, belief in career, correctness of choice and adequacy of education.

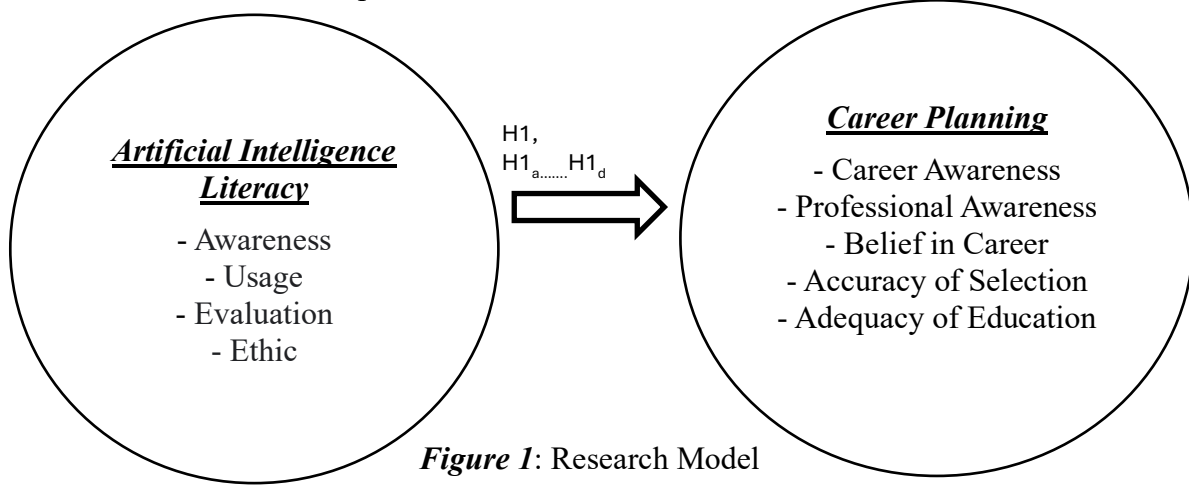
H1b: Usage positively and significantly affects career awareness, professional awareness, career belief, correctness of choice and adequacy of education.

H1c: Evaluation positively and significantly affects career awareness, professional awareness, belief in career, accuracy of choice and adequacy of education.

H1d: Ethics positively and significantly affects career awareness, professional awareness, belief in career, correctness of choice and adequacy of education.

### Model of The Research

The model of the research is presented below.



**Figure 1:** Research Model

### 2. 5. Data Collection Tools and Methods of The Research

In the study, the survey technique, which is one of the quantitative research methods, was used as the data collection method. The survey technique was carried out online and face to face.

#### Career Planning Scale

In the study, the "Career Planning" scale developed by Yavuz Eroglu, S. & Eroğlu, E. (2020) was used to examine career planning. The Career Planning scale consists of 5 dimensions and 23 statements in accordance with the five-point Likert method (1=Strongly Disagree to 5=Strongly Agree). The Career Planning scale consists of career awareness, professional awareness, belief in career, correctness of choice, and adequacy of education.

#### Artificial Intelligence Literacy Scale

In the study, the "Artificial Intelligence Literacy" scale developed by Polatgil, M. & Güler, A. (2023) was used to examine artificial intelligence literacy. The Artificial Intelligence Literacy scale consists of 4 dimensions and 12 statements according to the five-point Likert method (1 = Strongly Disagree to 5 = Strongly Agree). The artificial intelligence literacy scale consists of awareness, usage, evaluation and ethics dimensions.

### 2. 6. Data Analysis Methods

The data acquired in the scope of the research were analyzed with SPSS 25 and AMOS 24 package programs. Data regarding Descriptive Statistics were analyzed with numbers and percentages, the normal distribution of scale expressions, kurtosis and skewness values, the validity of the scales, cr and ave values, and their reliability were analyzed with Cronbach Alpha ( $\alpha$ ) method. For test the factor structure of the career planning and artificial intelligence literacy scales used within the study, confirmatory factor analysis was conducted within the scope of structural equation

modeling. The hypotheses prepared in accordance with the purpose of the study were analyzed with Structural Equation Model-Path Diagram.

### 2. 7. Descriptive and Normality Tests of Scale Dimensions

The minimum, maximum, mean, and standard deviation values for the participation levels of the students who participated in the study in the scale dimensions and the skewness and kurtosis values for the normality distribution of the scale dimensions are given in Table 1 below.

**Table 1:** Descriptive Statistics and Normality Test Findings of Scale Dimensions

	<b>n</b>	<b>Minimum</b>	<b>Maximum</b>	<b>X (Average)</b>	<b>ss</b>	<b>Skewness</b>	<b>Kurtosis</b>
Career Awareness	361	1	5	1.93	0.490	0.509	1.411
Professional Awareness	361	1	5	2.01	0.672	0.579	0.592
Belief in Career	361	1	5	1.77	0.733	1.205	1.871
Accuracy of Selection	361	1	5	1.86	0.738	0.759	1.837
Adequacy of Education	361	1	5	2.59	0.865	0.092	-.560
Awareness	361	1	5	2.27	0.914	0.326	0.224
Usage	361	1	5	2.65	0.871	0.193	0.197
Evaluation	361	1	5	1.96	0.555	-.554	-.707
Ethic	361	1	5	2.11	0.697	0.486	0.378

When we examine Table 1, it is seen that the skewness and kurtosis coefficients vary between -.554 and 1.871. Values between +2.0 and -2.0 are among the acceptable values (George & Mallery, 2010). Analysis indicates that the data conform to a normal distribution.

### 2. 8. Findings Regarding Confirmatory Factor Analysis

Confirmatory factor analysis was used to survey the factor structure of the artificial intelligence literacy scale consisting of 12 statements and the career planning scale consisting of 23 statements used within the scope of the research.

**Table 2:** Standardized Factor Loading Values

<b>Factors</b>	<b>Factor Value</b>	<b>S.E.</b>	<b>C.R.</b>	<b>Factors</b>	<b>Factor Value</b>	<b>S.E.</b>	<b>C.R.</b>
Career F1	0.737	0,025	20.528	Awareness F1	0.874	0.038	29.721
Career F2	0.579	0,027	37.001	Awareness F2	0.533	0.029	17.851
Career F3	0.872	0,025	40.412	Awareness F3	0.704	0.027	13.150
Career F4	0.611	0.028	26.914	Usage F1	0.627	0.038	21.790
Career F5	0.836	0.030	43.810	Usage F2	0.929	0.020	29.580
Career F6	0.602	0.031	44.340	Usage F3	0.762	0.031	25.521
Career F7	0.800	0.025	40.878	Evaluation F1	0.693	0.035	32.974
Career F8	0.612	0.031	23.746	Evaluation F2	0.803	0.031	34.763
Career F9	0.816	0.021	20.647	Evaluation F3	0.927	0.021	27.798
Professional F1	0.655	0.021	26.918	Ethic F1	0.783	0.035	35.434
Professional F2	0.826	0.029	24.652	Ethic F2	0.869	0.032	23.348
Professional F3	0.695	0.024	23.732	Ethic F3	0.698	0.022	28.733
Professional F4	0.657	0.028	18.708				
Career B. F1	0.612	0.034	35.434				
Career B. F2	0.751	0.032	20.647				
Career B. F3	0.833	0.020	29.931				
Career B. F4	0.646	0.021	19.651				

Selection A. F1	0.897	0.024	14.050
Selection A. F2	0.646	0.024	22.090
Selection A. F3	0.698	0.027	23.080
Education A. F1	0.798	0.022	21.021
Education A. F2	0.837	0.020	32.976
Education A. F3	0.709	0.035	35.763

(S.E.: Standard Error, CR: T Value, N=361)

In the testing phase of structural validity, first of all, the goodness of fit criteria must be met. After the suitability of the fit criteria is met, it is checked whether the factor loading values are significant or not. In order for the factor loading values to be considered significant, they must be over 0.50. Expressions with a T value of over 1.96 generally give statistically significant results in factor loading values (Hair et al., 2014, s. 115).

**Table 3:** Goodness of Fit Values

Values	Perfect Rapport	Acceptable Compliance
$\chi^2/df$	$0 \leq \chi^2/df \leq 2$	$2 \leq \chi^2/df \leq 5$
GFI	$0.95 \leq GFI \leq 1.00$	$0.90 \leq GFI \leq 0.95$
AGFI	$0.90 \leq AGFI \leq 1.00$	$0.85 \leq AGFI \leq 0.90$
CFI	$0.95 \leq CFI \leq 1.00$	$0.90 \leq CFI \leq 0.95$
RMSEA	$0.00 \leq RMSEA \leq 0.05$	$0.05 \leq RMSEA \leq 0.08$
RMR	$0.00 \leq RMR \leq 0.05$	$0.05 \leq RMR \leq 0.08$

Reference: Tabachnick & Fidell, 2007; Kline, 2010; Rezaei et al., 2020; Marsh et al., 2006; Hooper et al., 2008; Lei et al., 2017; Brown, 2015.

Fit indices were calculated for the artificial intelligence literacy scale and in line with the modification suggestions, covariances were assigned between the error terms e8-e9, e4-e5 in order to improve the fit indices and the analyses were repeated. In this direction, the goodness of fit values are as follows.  $\chi^2/df=3.90$ , GFI= 0.91, AGFI= 0.87, CFI= 0.96, RMSEA= 0.05, RMR= 0.05. Within the scope of the findings, the goodness of fit values of the artificial intelligence literacy scale were at an acceptable level and the validity of the scale's 12 expressions and 3-dimensional structure was provided. For the career planning scale,  $\chi^2/df=4.15$ , GFI= 0.93, AGFI= 0.85, CFI= 0.91, RMSEA= 0.05, RMR= 0.6 goodness of fit results were obtained. With respect to the findings, the goodness of fit values of the career planning scale were at an acceptable level and the scale's 5-dimensional construct validity was ensured with 23 statements.

## 2. 9. Findings Regarding Reliability and Validity Analysis

Reliability refers to the consistency of the statements in the scale within that measurement. It is measured by the Cronbach alpha value, which shows that the scale is error-free. When the values in Table 4 are examined, it is seen that the scales and their sub-dimensions are above 0.70. Therefore, all scales used in the study are reliable (Nunnally & Bernstein, 1994, p.265).

**Table 4:** Findings Regarding Reliability and Validity Analysis

	Number of Expressions	Reliability	Cr Value	Ave Value
Career Planning	<b>23</b>	<b>0.900</b>	<b>0.963</b>	<b>0.538</b>
Career Awareness	9	0.733	0.907	0.528
Professional Awareness	4	0.717	0.802	0.506
Belief in Career	4	0.801	0.805	0.512
Accuracy of Selection	3	0.762	0.795	0.569
Adequacy of Education	3	0.756	0.825	0.613
Artificial Intelligence Literacy	<b>12</b>	<b>0.752</b>	<b>0.946</b>	<b>0.601</b>
Awareness	3	0.716	0.753	0.515
Usage	3	0.823	0.822	0.612
Evaluation	3	0.770	0.852	0.661
Ethic	3	0.703	0.828	0.618

On account of guarantee the validity of a variable, it is necessary to examine the CR (Composite Reliability) and AVE (Average Variance Extracted) values. The AVE value must be above 0.50 and the CR value must be above 0.70 (Hair et al., 2014, p.605). A review of Table 4 indicates that the AVE values of the variables exceed 0.50, while the CR values are greater than 0.70. Therefore, the scales provide validity.

**2. 10. Findings Regarding Hypothesis Tests**

Within the extent of the investigative, the effects of artificial intelligence literacy sub-dimensions (awareness, use, evaluation, ethics) on career planning sub-dimensions (career awareness, professional awareness, belief in career, accuracy of choice, adequacy of education) are researched. In this context, structural equation model path analysis was used and the findings are given in Table 5.

**Table 5:** Structural Equation Model Findings

			Estimate	S.E.	C.R.	P	Conclusion
Career Awareness	<---	Awareness	0.017	0.013	1.286	0.198	REJECTION
Professional Awareness	<---	Awareness	0.104	0.051	2.018	*	ACCEPTANCE
Belief in Career	<---	Awareness	-.060	0.051	-1.173	0.241	REJECTION
Accuracy of Selection	<---	Awareness	-.007	0.048	-.149	0.882	REJECTION
Adequacy of Education	<---	Awareness	0.113	0.056	2.028	*	ACCEPTANCE
Career Awareness	<---	Usage	-.045	0.023	-1.973	*	ACCEPTANCE
Professional Awareness	<---	Usage	-.208	0.072	-2.883	*	ACCEPTANCE
Belief in Career	<---	Usage	-.194	0.072	-2.681	*	ACCEPTANCE
Accuracy of Selection	<---	Usage	-.010	0.067	-.152	0.879	REJECTION
Adequacy of Education	<---	Usage	-.210	0.077	-2.734	*	ACCEPTANCE
Career Awareness	<---	Evaluation	-.410	0.180	-2.281	*	ACCEPTANCE
Professional Awareness	<---	Evaluation	-2.018	0.476	-4.239	*	ACCEPTANCE
Belief in Career	<---	Evaluation	-1.815	0.466	-3.895	*	ACCEPTANCE
Accuracy of Selection	<---	Evaluation	-1.584	0.448	-3.537	*	ACCEPTANCE
Adequacy of Education	<---	Evaluation	-1.504	0.484	-3.109	*	ACCEPTANCE
Career Awareness	<---	Ethic	1.530	0.691	2.214	*	ACCEPTANCE

			Estimate	S.E.	C.R.	P	Conclusion
Professional Awareness	<---	Ethic	6.248	1.810	3.451	*	ACCEPTANCE
Belief in Career	<---	Ethic	6.574	1.851	3.552	*	ACCEPTANCE
Accuracy of Selection	<---	Ethic	5.853	1.703	3.437	*	ACCEPTANCE
Adequacy of Education	<---	Ethic	6.442	1.856	3.471	*	ACCEPTANCE

Significance level was set at  $\alpha = 0.05$ . \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ ; S.E.: Standard Error; C.R.: Critical Ratio; N = 361.

According to the findings obtained from the analysis, the awareness dimension of artificial intelligence literacy significantly affects professional awareness ( $\beta = 0.104$ ;  $p < 0.05$ ) and adequacy of education ( $\beta = 0.113$ ;  $p < 0.05$ ), while it doesn't have a significant effect on career awareness, belief in career, and accuracy of choice ( $p > 0.05$ ). The usage dimension significantly affects career awareness ( $\beta = -0.045$ ;  $p < 0.05$ ), professional awareness ( $\beta = -0.208$ ;  $p < 0.05$ ), belief in career ( $\beta = -0.194$ ;  $p < 0.05$ ), and adequacy of education ( $\beta = -0.210$ ;  $p < 0.05$ ); however, it doesn't significantly affect accuracy of choice ( $p > 0.05$ ). The evaluation dimension negatively and significantly affects career awareness ( $\beta = -0.410$ ;  $p < 0.05$ ), professional awareness ( $\beta = -2.018$ ;  $p < 0.05$ ), belief in career ( $\beta = -1.815$ ;  $p < 0.05$ ), accuracy of choice ( $\beta = -1.584$ ;  $p < 0.05$ ), and adequacy of education ( $\beta = -1.504$ ;  $p < 0.05$ ). Finally, the ethical dimension positively and significantly affects career awareness ( $\beta = 1.530$ ;  $p < 0.05$ ), professional awareness ( $\beta = 6.248$ ;  $p < 0.05$ ), belief in career ( $\beta = 6.574$ ;  $p < 0.05$ ), accuracy of choice ( $\beta = 5.853$ ;  $p < 0.05$ ), and adequacy of education ( $\beta = 6.442$ ;  $p < 0.05$ ).

Research indicates that the results, H1a and H1d were partially accepted, as the awareness and ethical dimensions significantly affected some sub-dimensions of career planning, while H1b and H1c were partially accepted, with usage and evaluation showing significant effects on certain sub-dimensions but in a negative direction or non-significant for others.

### 3. Conclusion And Recommendations

Artificial intelligence (AI) is transforming many fields, particularly education, health, and trade, and has the potential to reshape societies. Therefore, integrating ethical standards into the development and implementation of AI technologies is increasingly critical. Artificial intelligence literacy, which includes awareness, usage, evaluation, and ethical understanding, is an essential skill that helps individuals adapt to fast changing technologies and make well informed decisions. In this context, the current study seeks to explore how artificial intelligence literacy influences university students career planning. It was concluded that the awareness dimension of artificial intelligence literacy significantly affects students professional awareness ( $\beta = 0.104$ ;  $p < 0.05$ ) and perceptions of educational adequacy ( $\beta = 0.113$ ;  $p < 0.05$ ), whereas it doesn't significantly affect career awareness ( $\beta = 0.017$ ;  $p > 0.05$ ), belief in career ( $\beta = -0.060$ ;  $p > 0.05$ ), or accuracy of choice ( $\beta = -0.007$ ;  $p > 0.05$ ). The usage dimension significantly affects career awareness ( $\beta = -0.045$ ;  $p < 0.05$ ), professional awareness ( $\beta = -0.208$ ;  $p < 0.05$ ), belief in career ( $\beta = -0.194$ ;  $p < 0.05$ ), and adequacy of education ( $\beta = -0.210$ ;

$p < 0.05$ ), while it doesn't significantly affect accuracy of choice ( $\beta = -0.010$ ;  $p > 0.05$ ). Notably, the significant effects of the usage dimension are negative, suggesting that frequent AI use may increase students perceptions of uncertainty regarding career stability and future employment conditions.

The evaluation dimension negatively and significantly affects career awareness ( $\beta = -0.410$ ;  $p < 0.05$ ), professional awareness ( $\beta = -2.018$ ;  $p < 0.05$ ), belief in career ( $\beta = -1.815$ ;  $p < 0.05$ ), accuracy of choice ( $\beta = -1.584$ ;  $p < 0.05$ ), and adequacy of education ( $\beta = -1.504$ ;  $p < 0.05$ ). This indicates that as students critically assess AI applications and their long-term implications, they may perceive greater risks regarding job security, occupational change, and educational sufficiency. Rather than reflecting a lack of knowledge, this may indicate an emerging critical awareness of AI's disruptive potential, highlighting the need for structured guidance to convert evaluation into strategic and opportunity-oriented career planning.

The ethical dimension positively and significantly affects career awareness ( $\beta = 1.530$ ;  $p < 0.05$ ), professional awareness ( $\beta = 6.248$ ;  $p < 0.05$ ), belief in career ( $\beta = 6.574$ ;  $p < 0.05$ ), accuracy of choice ( $\beta = 5.853$ ;  $p < 0.05$ ), and adequacy of education ( $\beta = 6.442$ ;  $p < 0.05$ ). These findings demonstrate that students with greater awareness of ethical principles such as data privacy, transparency, accountability, moral values, and social welfare approach their career planning with clarity and confidence. Ethical literacy functions as a stabilizing and empowering factor, strengthening professional identity and supporting informed, resilient career decisions.

There is a noticeable lack of studies in the literature that directly explore the subject of this research. When these studies are examined, Özer & Eker (2025) tested the relationship between AI literacy and personal achievement and career commitment among high school students using a structural equation model. They concluded that AI literacy is significantly and positively related to personal achievement and career commitment. In Köken's (2025) research, the relationship between AI literacy and career commitment among coaches was examined. The study found that AI literacy makes individuals' career decisions more conscious and flexible.

Based on these results, universities should adopt a comprehensive and strategic approach to developing artificial intelligence literacy. Structured curricula and interdisciplinary courses combining technology, ethics, social sciences, and career development can strengthen students practical and reflective competencies. Applied workshops, simulation-based projects, and project assignments allowing critical engagement with AI applications can enhance understanding of professional and ethical implications. Career centers should organize seminars, hands-on training sessions, sector-specific AI awareness programs, internships, and mentoring opportunities to help students adapt to changes in professional roles. Additionally, psychological counseling and career

guidance services should address AI-related career anxiety and uncertainty, helping students view technological transformation as an opportunity rather than a threat. At the policy level, higher education institutions and decision makers should develop national frameworks for artificial intelligence literacy standards to ensure consistency and sustainability. Strengthening artificial intelligence literacy in this structured and holistic manner willn't only support students career planning but also enhance their capacity to adapt effectively to rapid technological change.

Future research could examine how AI literacy interventions affect students career adaptability, explore differences across academic disciplines, and investigate the role of institutional guidance in reducing career related uncertainty. Such studies would help educators design more effective programs to strengthen students professional and ethical competencies in the AI era.

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## Genişletilmiş Özet

Dijital dönüşümün hız kazandığı çağımızda yapay zekâ konusu sağlıktan eğitime, ticaretten kamu hizmetlerine kadar birçok alanda dönüştürücü etkiye sahip olmaktadır. Hayatın neredeyse her alanında karşımıza çıkan yapay zekâ konusu iş hayatı başta olmak üzere tartışılan konuların başında yer almaktadır. İçerisinde bulunduğumuz Yapay zekâ çağında insanlar bu çağın gerektirdiği yetkinlikleri bilmek durumundadırlar. Üniversite öğrencileri açısından değerlendirildiğinde ise, gelecekteki mesleki tercihlerinin şekillendiği bu dönemde yapay zekâ okuryazarlığı önemli bir yetkinlik olarak ön plana çıkmaktadır. Yapay zekâ çağının gereksinimlerini anlayabilmek ise, yapay zekâ okuryazarlığını öğrendikten sonra onu kullanabilme ve bu çağın meydana getireceği değişimlere uyum sağlayabilme yeteneği ile mümkündür. Üniversite dönemi kariyer planlamasına karar verildiği ve artık uygulama aşamasına geçilmeye çalışıldığı bir dönem olarak karşımıza çıkmaktadır. Bu kapsamda, kişilerin öğrencilik dönemlerinde yapay zekâ okuryazarlığı kariyer planlamaları hususunda etkili bir konu olmaktadır. Yapay zekâ kavramıyla, değişen günümüzde öğrenciler bu doğrultuda kariyerlerine yön verme düşüncesine yönelmektedirler. Uluslararası literatürde OECD, UNESCO ve Holmes ve arkadaşlarının çalışmaları yapay zekânın kariyer planlama süreçleri üzerinde stratejik etkiler doğurduğunu göstermektedir. Ancak Türkiye açısından bu ilişkinin kapsamlı biçimde incelendiği çalışmalar oldukça sınırlıdır. Dolayısıyla, bu çalışmanın amacını, yapay zekâ okuryazarlığı ve kariyer planlaması kavramlarının incelenmesinin ardından öğrencilerin yapay zekâ okuryazarlığının kariyer planlaması üzerindeki etkisinin incelenmesi oluşturmaktadır.

Kariyer planlamasında yapay zekâ okuryazarlığının önemi, eğitim ve profesyonel anlamdaki gelişim süreçlerinde ön plana çıkmaktadır. Kişiler, yapay zekânın işlevlerini ve potansiyel etkilerini kavrayarak, hangi becerilerin önümüzdeki senelerde değer kazanacağını fark edebilirler. Bu farkındalık, eğitim seçiminden sertifika programlarına, staj ve iş tecrübelerinden iş değişikliği kararlarına kadar geniş bir yelpazede etkili olmaktadır. Özellikle teknoloji odaklı sektörlerde çalışan kişiler, yapay zekâ okuryazarlığı sayesinde iş hayatında rekabet avantajı sağlayabilir ve kariyerlerini daha bilinçli bir şekilde yönlendirebilirler. Aynı zamanda, yapay zekânın otomasyon süreçlerindeki bazı iş kollarında iş kaybına yol açabileceği gerçeği de göz önüne alındığında, yapay zekâ okuryazarlığı, iş güvencesi ve kariyer sürekliliği bakımından önemli bir unsur olarak karşımıza çıkmaktadır. Ek olarak, yapay zekâ okuryazarlığı, kişilerin girişimcilik ve yenilik kapasitelerine de etki etmektedir. Yapay zekâ sunmuş olduğu veri analizi ve öngörü yetenekleri sayesinde, girişimcilerin pazarı daha doğru ve etkin şekilde analiz ederek iş stratejilerini optimize etmesine yardımcı olmaktadır. Bu kapsamda yapay zekâ okuryazarlığı, yalnızca mevcut kariyer planlamasını değil, aynı zamanda yeni iş fırsatlarını keşfetme ve yaratıcı çözümler geliştirme yeteneğini de

güçlendirmektedir. Özellikle dijital çağın gerektirdiği esneklik ve yenilikçilik, yapay zekâ okuryazarlığıyla desteklendiğinde, kişilerin kariyer planlamalarında daha dinamik olmaları mümkün hale gelmektedir.

Günümüzde eğitim hayatını sürdüren gençlerin yapay zekâya ilişkin farkındalık geliştirmeleri, öncelikle yapay zekâ okuryazarlığı kazanmalarıyla mümkün olmaktadır. Her ne kadar yapay zekâ, bazı meslek alanlarında çalışma imkânlarını kısıtlıyormuş gibi görünse de aslında yeni iş olanakları yaratarak kariyer dünyasını dönüştürmektedir. Kariyer planlamasında yapay zekâ farkındalığının artırılması, kişilerin sürdürülebilir ve geleceğe yönelik kariyer hedefleri oluşturmasına katkı sağlamaktadır. Bu bağlamda, yapay zekâ ve uygulamaları hakkında yeterli bilgiye sahip olmayan öğrenciler, günümüz dijital çağında kariyer planlaması sürecinde ciddi zorluklarla karşı karşıya kalabilmektedir. Yapay zekâ okuryazarlığı ve kariyer planlaması değişkenlerinin birlikte incelenmesi ve öğrencilerden elde edilen veriler doğrultusunda analizlerin gerçekleştirilmesi çalışmayı özgün kılmaktadır. Araştırma kapsamında, yapay zekâ okuryazarlığının ve alt boyutlarının (Farkındalık, Kullanım, Değerlendirme, Etik) kariyer planlama ve alt boyutları (Kariyer Farkındalığı, Mesleki Farkındalık, Kariyere Yönelik İnanç, Seçimin Doğruluğu, Eğitimin Yeterliliği) üzerinde istatistiksel olarak pozitif ve anlamlı bir etkisinin olup olmadığını içeren  $H_1$  hipotezi oluşturulmuştur. Oluşturulan hipotez doğrultusunda, Bolu Abant İzzet Baysal Üniversitesinde öğrenim gören 361 öğrenciden anket yöntemiyle veriler toplanmıştır. Elde edilen verilerin SPSS 25 ve AMOS 24 paket programlarıyla analizleri gerçekleştirilmiştir. Tanımlayıcı İstatistiklere ilişkin veriler sayı ve yüzdeler aracılığıyla, ölçek ifadelerinin normal dağılıma uygunlukları basıklık ve çarpıklık değerleriyle ölçeklerin geçerlilikleri cr ve ave değerleri ile güvenilirlikleri ise, Cronbach Alpha ( $\alpha$ ) yöntemi ile analiz edilmiştir. Çalışmada kullanılan kariyer planlama ve yapay zekâ okuryazarlık ölçeklerinin faktör yapısını test etmek için, yapısal eşitlik modellemesi dahilinde doğrulayıcı faktör analizi yapılmıştır. Çalışma amacına uygun olacak şekilde hazırlanan hipotezler ise, Yapısal Eşitlik Modeli- Yol Diyagramı ile analiz edilmiştir.

### **Araştırmanın Hipotezleri;**

H1: Yapay zekâ okuryazarlığının ve alt boyutlarının kariyer planlama ve alt boyutları üzerinde istatistiksel olarak pozitif ve anlamlı bir etkisi vardır.

H1a: Farkındalık, kariyer farkındalığı, mesleki farkındalığı, kariyere yönelik inancı, seçimin doğruluğu ve eğitimin yeterliliğini istatistiksel olarak pozitif ve anlamlı şekilde etkilemektedir.

H1b: Kullanım, kariyer farkındalığı, mesleki farkındalığı, kariyere yönelik inancı, seçimin doğruluğu ve eğitimin yeterliliğini istatistiksel olarak pozitif ve anlamlı şekilde etkilemektedir.

H1c: Değerlendirme, kariyer farkındalığı, mesleki farkındalığı, kariyere yönelik inancı, seçimin doğruluğu ve eğitimin yeterliliğini istatistiksel olarak pozitif ve anlamlı şekilde etkilemektedir.

H1d: Etik, kariyer farkındalığı, mesleki farkındalığı, kariyere yönelik inancı, seçimin doğruluğu ve eğitimin yeterliliğini istatistiksel olarak pozitif ve anlamlı şekilde etkilemektedir.

Analiz sonuçlarından elde edilen bulgulara göre, yapay zekâ boyutu olan farkındalık, kariyer planlaması boyutları olan kariyer farkındalığı, kariyere yönelik inanç ve seçimin doğruluğunu etkilememektedir. Aynı zamanda kullanım boyutu, seçimin doğruluğunu etkilememektedir. Üniversite öğrencilerinin yapay zekâ okuryazarlığı hakkında ve gelecekteki etkileri konusunda yeterli düzeyde bilgi, birikim ve bu konuya hâkim oldukları tartışma konusu olarak karşımıza çıkmaktadır. Yapay zekâ okuryazarlığı hakkında bilgi sahibi gençlerin yakın gelecekte bazı mesleklerin yok olabileme ihtimalinin farkında olacaktır. Dolayısıyla, bu konuda farkındalık sahibi öğrencilerin kariyer planlamalarında da bu durumun etki edeceği düşünülerek çalışma şekil almıştır. Bu kapsamda analiz sonuçlarına göre üniversite öğrencilerinin yapay zekâ uygulamaları hakkında bilgi sahibi olmaları gerekliliği ve yapay zekânın gelecekteki etkileri hakkında farkındalıklarının yaratılması gerekmektedir. Dolayısıyla, üniversitelerde kariyer merkezleri tarafından yapay zekâ uygulamaları hakkında seminerler ve en çok kullanılan gündemdeki programlar hakkında (ör. chatGPT, copilot, gemini vb.) temel şekilde bilgilendirici konferanslar düzenlenebilir.

Yapay zekâ okuryazarlığının değerlendirme boyutu, tüm alt boyutlarda negatif ve anlamlı etkiler ortaya koymuştur. Bu, öğrencilerin yapay zekâyı eleştirel değerlendirme sürecinde bilgi eksiklikleri nedeniyle kariyer planlamasında olumsuz etkiler yaşadığını göstermektedir. Öğrencilerin yapay zekâyı değerlendirmeleri neticesinde kariyer planlamalarında yer alan kariyer farkındalığı, mesleki farkındalıkları, kariyere yönelik inançları, seçimlerinin doğruluğu ve eğitimin yeterliliğine olan negatif etkinin aslında yine öğrencilerin bu konu hakkında sahip oldukları bilgi düzeylerinin yetersiz kalmasından kaynaklandığını söylemek mümkündür. Aksi halde kendisini yapay zekâ çağına uyarlayabileceğine inanan kişilerin kariyer planlama noktasında da yaratacağı etkinin olumlu olması beklenirdi. Araştırmamızda ulaşılan sonucun negatif olması öğrencilerin yapay zekâ okuryazarlığının değerlendirilmesinde de birtakım eksiklikler yaşadığını düşündürmektedir.

Yapay zekâ okuryazarlığının etik boyutu tüm alt boyutlarda pozitif ve anlamlı etki göstermektedir. Etik yaklaşım, öğrencilerin kariyer planlamasında bilinçli ve olumlu kararlar almalarına katkı sağlamaktadır. Yapay zekânın kabul görebilmesi açısından insan faktörü üzerindeki etkilerinin ve insan faktörüyle uyumunun nasıl sağlanacağına yönelik araştırmaların yapılması uzun vadede yapay

zekânın etkilerini daha iyi anlamamıza yardımcı olacaktır. Yapay zekâ okuryazarlığı ve kariyer planlama değişkenlerinin beraber incelendiği çalışmaların alanda sınırlı olması nedeniyle farklı örneklem gruplarıyla araştırmanın yapılması aynı zamanda yapay zekâ okuryazarlığının da farklı örneklem gruplarında incelenmesi faydalı olacaktır.

Sonuç olarak, öğrencilerin kariyer planlamalarını gerçekleştirdiği süreçte yapay zekâ okuryazarlığının rolü stratejik bir öneme sahiptir. Kariyer planlamalarını gerçekleştirirken yapay zekâ okuryazarlığından ne düzeyde faydalandıkları ve kariyer planlarına yapay zekâ okuryazarlığının etkisinin yönü ve derecesi önem arz etmektedir. Ancak bu etkinin yönü ve derecesi, öğrencilerin konu hakkındaki bilgi düzeyleri, etik bakış açıları ve değerlendirme yeteneklerine bağlı olarak değişmektedir. Üniversiteler ve politika yapıcılar, öğrencilerin bu alandaki farkındalıklarını arttırmaya yönelik uygulamalarla onları gelecekteki iş dünyasına daha bilinçli ve farkındalık sahibi kişiler olarak hazırlayabilirler. Yapay zekâ çağında sürdürülebilir kariyer planlaması, sadece teknik becerilerle değil, bunun yanı sıra etik ve eleştirel düşünme yetenekleriyle desteklendiğinde mümkün hale gelecektir. Uygulama açısından değerlendirildiğinde ise, üniversitelerde kariyer merkezlerinde yapay zekâ farkındalığını arttırmaya yönelik seminerler, atölyeler ve bilgilendirici etkinlikler düzenlenebilir. Ek olarak, ders müfredatlarına yapay zekâ okuryazarlığına yönelik zorunlu veya seçmeli derslerin eklenmesi, öğrencilerin teknolojiyi etkin kullanmalarına katkı sağlayacaktır. Politika yapıcılar açısından ise, yapay zekâ teknolojilerinin eğitim ve iş gücü planlamasına uyumunda etik standartların ön planda tutulması önemlidir.