Emotional Intelligence or Artificial Intelligence?: Emotional Artificial Intelligence

Emine Kambur[1]

ABSTRACT

Emotional intelligence and artificial intelligence have become quite popular concepts in the relevant literature in recent years. This article combines these concepts. It examines how emotional intelligence affects artificial intelligence and the cause-effect relationship between the two. The data are collected from 152 people who have knowledge of emotional intelligence and artificial intelligence. As a result of the correlation analysis, it was determined that there is a significant relationship between emotional intelligence and the dimensions of artificial intelligence. In addition, as a result of the regression analysis, it was determined that there is a significant cause-effect relationship between emotional intelligence and the comprehensiveness, format, and timeliness dimensions of artificial intelligence.

Keywords: *Emotional Intelligence, Artificial Intelligence, Emotional Artificial Intelligence*

[1] Dr. Istanbul Aydin University, Department of Business Management, eminekambur@aydin.edu.tr, Orcid: 0000-0003-4946-6867.

* Research Article. Received: 16.08.2021, Accepted: 18.10.2021.

DOI: 10.17932/IAU.FCPE.2015.010/fcpe_v07i2004

INTRODUCTION

Emotional intelligence (EI) has become quite common on an institutional and individual basis in recent years. EI has a significant impact on individuals' life satisfaction, career development, social relations, career development, work engagement, and friendships. From an institutional perspective, EI increases employees' job satisfaction, performance, and organizational commitment. These results have an impact on the work efficiency and work determination of the employees. EI is particularly useful for employees and organizations in communication positions (Yao et al., 2019).

When it comes to artificial intelligence (AI), it is also called machine intelligence (Russell and Norvig, 2016). AI is much more effective and efficient in both digital and physical business life. It has become a popular topic in academic literature after the 1950s. AI is used in sectors such as communication, information technologies, health, agriculture, logistics, education, and aviation. It creates profit especially in banking, human resources, health, tourism, and hotel sectors. AI not only generates profits by automating mundane tasks, but it also improves the employee experience. AI using chatbots also contributes greatly to the improvement of service quality (Buhalis and Leung, 2018).

While the prevalence of AI and its impact on improving work productivity is acknowledged, concerns about employee replacement of their jobs are also growing. Robinson (2017) stated that the number of employees in fast food businesses can be reduced. It is predicted that approximately 25% of the activities in hotel establishments will be automated (Chui et. al., 2016). According to the OECD (2016) report, 9% of jobs in 21 countries will be automated. Approximately 50% of financial and insurance businesses are also expected to move to AI (He & Guo, 2018). Morikawa (2017) stated that artificial intelligence will be seen more in ordinary jobs, unlike jobs that require high-level intelligence. It has been claimed that people may be needed continuously in high-level jobs.

Articles so far on AI have focused on the technical efficiency of AI. There is no study on how it can affect people emotionally. It is thought that it may be related to AI as it affects people's EI efficiency, performance, empathy abilities, and awareness. Comprehending the interaction between EI and

AI makes it easier for individuals to analyze and accept new and complex ideas. It can add originality in synthesis and evaluation. This study explores how EI affects the perspective on AI and the relationship between the two. Particular attention has been paid to how EI affects sub-dimensions of AI.

In other parts of the article, AI and EI are explained and hypotheses are formed. Then the hypotheses are tested and the results are presented. There is a need to conduct research on how the EI of people affects their thoughts about AI. Studies mostly focus on the technical and technological aspects of AI. It does not focus on the emotional side. There is a need for careful examination of the mechanisms by which people perceive patterns of emotion. This article contributes to the literature as it mostly focuses on the emotional aspect, apart from the technical aspects of AI. As with any study, this study has some limitations. The study was carried out with 152 people reached. The sample group reached is one of the limitations of the study. Another limitation is that the study was conducted with a questionnaire. Due to the high cost, methods such as observation and interview were not preferred.

EMOTIONAL INTELLIGENCE

Advances in the field of psychology in the early 20th century triggered the investigation of individuals' emotional responses. In the 1960s, people started to express their feelings comfortably. The ability of individuals to express their emotions comfortably constitutes the beginning of the development of EI. Moreover, the development of EI is due to the detection of individuals' failure in their social lives despite their high results in general intelligence measurement tests (Seven, 2019). Accordingly, EI "has been defined as the ability to notice emotions, to distinguish and use emotions" (Mayer and Salovey, 1990). According to Goleman (2012), "it is the ability of individuals to recognize others and their own feelings and to manage these emotions".

EI includes not only evaluating the feelings of others and their own but also managing these emotions. Individuals with high EI can control these emotions and change their emotional states when necessary. Some individuals tend to be unable to control themselves, have weak structural bonds, and succumb to their anger. However, feelings must be understood and used. EI, which has qualities such as successful interpersonal

communication, empathy, and talent to control one's own emotions, may be effective in all areas of life (Kambur, 2018).

EI has four important approaches. According to Mayer et al. (2001), "the first approach is emotional perception, which shows the correct identification, expression, and differentiation of emotions; the second approach is emotional assimilation, which expresses emotion-based thinking, directing attention to important information; the third approach is emotional comprehension, which indicates the ability to recognize feelings between words and emotions and the last approach is the management of the individual's own emotions."

EI also has the potential to improve job performance and career success compared to traditional intelligence. People with high EI experience more career success, build strong personal relationships, and enjoy their health (Schutte et al., 2007). It has been determined that EI affects various business attitudes and behaviors in work environments. Lee and Ok (2012) claimed that EI is positively associated with stress and job dissatisfaction. In addition, EI affects one's ability to cope with environmental demands and pressures (Shi et al., 2014). EI positively affects employee engagement as it facilitates communication. People with high EI adapt more easily to the professional environment (Rozell et al., 2014). People who cannot control their emotions, on the other hand, engage in an internal struggle that hinders their ability to think and concentrate on their work. In addition, D'amato and Herzfeldt (2008) underlined that employees with high EI may have high job satisfaction and commitment.

As a result, EI affects every moment and area just like AI. However, it is not enough to just have feelings. Because emotions are in every person. In addition to recognizing and evaluating emotions, EI obtains information about emotions and ensures that it is reflected in daily life and work and appropriate reactions are given.

ARTIFICIAL INTELLIGENCE

The technological revolution has brought together many devices and systems to help solve the challenges faced in daily life activities. Most of these systems have been focused on solving problems. Makridakis (2017) stated that "the impact of digital and industrial revolutions has a great

impact on every aspect of life, society, companies, and employment". One of the biggest inventions of the system related to the technological revolution is artificial intelligence (AI) technology. AI has been defined as a computer-based system designed to perform human-made tasks (Simon, 1980). According to Russell and Norvig (2009), AI is "a technology that thinks like a human, acts like a human, thinks rationally and acts rationally". First of all, it is of great importance to understand what the basic principle of AI is. It can be said that the main principles are reasoning, planning, learning, logic, and perception (Perez and Yang, 2018).

The purpose of AI is to build machines that can do tasks that would normally require human intelligence. However, the purpose of those about the nature of intelligence is not to imitate intelligence, but to make the program intelligent. AI can make certain adjustments according to the speed of continuity (Makridakis, 2017). In addition, the importance of AI comes from improving and deepening the tasks performed by humans. This technology can process nonlinear relationships, learn, develop and make expert decisions. AI can quickly and reliably analyze vast amounts of data (Hilovska and Koncz, 2012).

In recent years, subcategories of artificial intelligence have also been widely used. Its subcategories such as data mining, predictive modeling, data analytics, and big data are among the most common. The newest and most advanced form of AI is capable of automatic processes and applications capable of changing the course of daily business life. Therefore, it is considered to have a great economic result and the potential for progress (Stoicescu, 2015).

Kaplan and Haenlein (2019) stated that "AI can be classified based on applications and evolution. Evolutionary AI can also be grouped into narrow AI, general AI, and super AI." Narrow AI includes the primary generation of AI where certain specific tasks are applied (Siri and Tesla). Second-generation AI can solve different problems autonomously. It also takes the name personal AI because it deals with specific problems. The third group is called super AI. This generation is expected to have scientific creativity and social skills (Wirth, 2018). Analytical AI benefits multiple intelligence and active learning together to guide future decisions. Kaplan and Haenlein (2019) underlined that "This AI strain will become popular.

It is predicted that humanized AI will have cognitive, emotional, and social intelligence and be aware of their interactions with others. However, this AI system has not yet been realized. Human-inspired AI has both cognitive and emotional intelligence (EI). This AI system can understand human emotions and incorporate them into decision making."

According to Nabiyev (2013), "AI is intertwined with various disciplines such as philosophy, mathematics, economics, neuroscience, psychology, computer engineering, and linguistics." The current achievements and multidisciplinary nature of AI have attracted the attention of both the public and the scientific community. AI enhances human capabilities and productivity. Many companies and organizations are increasing investments in AI. In addition, it has started to be seen in areas such as economy, marketing, health, banking. For example, in retail, Amazon uses analytics AI to support the inventory method. In the tourism industry, chatbots can generate automated answers to their questions. Despite its widespread use, its role in organizations can vary depending on the kind of works and complicacy. According to Huang and Rust (2018), "complex emotional-social tasks will be performed by humans, while complex cognitive-analytical tasks will be carried out by AI."

EMOTIONAL ARTIFICIAL INTELLIGENCE

"Can machines do what people do?" AI, which emerged with the question, has been developing rapidly since the 1950s. AI technologies perform simple and limited tasks with various programs that will make life and work easier. However, nowadays it has come to the point of detecting emotions. AI can detect emotions according to voice and face. For example, some AI technologies can need voices to understand users' emotions. Sometimes AI can reveal emotions by analyzing the small change that occurs in the face. However, it needs to develop a little more in recognizing complex facial expressions. Strange (2019) stated that scientists want to transfer cognitive development processes from childhood to youth to AI. In this way, it is predicted that AI will have feelings like humans in the future. But emotional and cognitive processes are intertwined. So emotions based solely on cognitive processes can be far from the truth (Pessoa, 2017).

Emotional AI carefully examines unfiltered facial expressions using optical sensors or webcams. According to Eminoğlu (2019) "AI describes the human face in real-time in an image or video. Computer-visible algorithms reveal key points in the human face. Deep learning algorithms analyze the pixels in these regions in order to classify the facial expressions. Finally, the combination of facial expressions is matched with emotions." Emotion AI also analyzes the way you speak. It observes speech tone and height to examine emotions. For example; Affective company uses "face coding and sensory identification" software to detect emotional responses of people to digital content while using Emotion AI. The only need is a camera and internet connection in a device belonging to the user. When users watch a video of the brand using this technology, they can convey their thoughts about the brand with their feelings without making a written or verbal comment. Then the emotions of all the participants watching the video are stored in a pool and can be monitored statistically on a dashboard belonging to the brand (Eminoğlu, 2019). Google Duplex, developed by Google, can also empathize and respond. This tool fulfills basic demands and interacts in ways that feel human. However, when it comes to complex demands, it needs people. iPhone X, developed by Apple, uses animojis. With the Face ID feature of the device, the facial movements of the user are defined in a completely private way. With the development of this technology, the person communicates in real time using the digital version of himself and his physical expressions. It is possible to use these digital situations in webinars, virtual career fairs and one-on-one meetings (Barrett, 2019).

As AI becomes smarter and more human-like, it can become an expectation that it is based on emotional intelligence. It can also become one of the main skills that a person needs to master in a world that focuses on emotions and in a business environment.

METHODOLOGY

The purpose of this study is to reveal whether emotional intelligence affects their perspectives towards artificial intelligence. For this purpose, correlation and regression tests have been carried out. The research hypotheses have been developed as follows:

H_1 = "There is a significant relationship between emotional intelligence and the comprehensiveness dimension of artificial intelligence."

H_2 = "There is a significant relationship between emotional intelligence and the format dimension of artificial intelligence."

H_3 = "There is a significant relationship between emotional intelligence and the accuracy dimension of artificial intelligence."

H_4 = "There is a significant relationship between emotional intelligence and the reliability dimension of artificial intelligence."

H_5 = "There is a significant relationship between emotional intelligence and the accessibility dimension of artificial intelligence."

H_6 = "There is a significant relationship between emotional intelligence and the flexibility dimension of artificial intelligence."

H_7 = "There is a significant relationship between emotional intelligence and the timeliness dimension of artificial intelligence."

H_8 = "There is a positive and significant cause and effect relationship between emotional intelligence and the comprehensiveness dimension of artificial intelligence."

H_9 = "There is a positive and significant cause and effect relationship between emotional intelligence and the format dimension of artificial intelligence."

H_{10} = "There is a positive and significant cause and effect relationship between emotional intelligence and the accuracy dimension of artificial intelligence."

H_{11} = "There is a positive and significant cause and effect relationship between emotional intelligence and the reliability dimension of artificial intelligence."

H_{12} = "There is a positive and significant cause and effect relationship between emotional intelligence and the accessibility dimension of artificial intelligence."

H_{13} = "There is a positive and significant cause and effect relationship between emotional intelligence and the flexibility dimension of artificial intelligence."

H_{14} = "There is a positive and significant cause and effect relationship

between emotional intelligence and the timeliness dimension of artificial intelligence."

Universe and Sample

The universe of this article consists of people who have information about EI and AI. For this purpose, 300 people have been reached. The questionnaire form was delivered to the participants online using a simple random sampling method. Research has been conducted by receiving feedback from 152 online questionnaires.

Data Collection Procedure and Questionnaires

The scales used in the study were created according to a five-point Likert (1=strongly disagree; 5=strongly agree). The data were collected between 04.20.2021-05.10.2021 by using electronic mail via the questionnaire form. The questionnaire form consists of three parts. The first part includes questions about the "Artificial Intelligence Scale" in order to determine the participants' thoughts on AI. Wixom and Todd (2005) developed the scale evaluating participants' perception of AI. It is used by Prentice et al., (2020). This scale has seven dimensions. These dimensions are comprehensiveness, format, accuracy, reliability, accessibility, flexibility, and timeliness, respectively. In the second part, "Emotional Intelligence Scale" is included to determine the emotional intelligence levels of the participants. The self-report scale (WEIS) was used to measure emotional intelligence. This scale was developed by Law et al. (2004). When the literature is examined comprehensively, it is seen that there are many scales developed for EI. However, WEIS was preferred in this study because it is widely used and cited in the literature. This scale also has 16 items and 4 dimensions. These dimensions are self-emotion appraisal (SEA), other-emotion appraisal (OEA), use of emotion (UOE), and regulation of emotion (ROE), respectively. The last part consists of questions about the demographic characteristics of the participants.

FINDINGS

Reliability Analysis

Reliability is defined as the measurement tool giving similar results when applied to different sampling selected from the same universe at different places, at different times. In a sense, this refers to the consistency between

the measurement results made at different times with the same measurement tool. Errors arising from the participants in the research, the environment where the measurement is made, the person making the measurement and the measurement tool can be effective in the measurements made. In addition, the fact that the measurement is about concrete and abstract issues also has an effect on reliability. Numerous measurement results made with the same measurement tool related to the concept in question, whether it is abstract or tangible, brings closer to the real score (Gürbüz and Şahin, 2017). The scale is considered to be reliable in cases where the reliability level is 0,70 and above. In some cases, 0.50 and above may be accepted. When the reliability level of the scale is above 0.70, it means that the scale is reliable. In cases where the reliability level is above 0.90, the scale has a very high reliability level and can be used safely in forming scientific judgments (Özdamar, 2015).

Table 1: Reliability Analysis Results of The Scales

Cronbach's Alpha	**%**	**N**
Artificial Intelligence	0,932	20
Comprehensiveness	0,741	3
Format	0,615	3
Accuracy	0,899	3
Reliability	0,895	2
Accessibility	0,884	3
Flexibility	0,499	3
Timeliness	0,838	3
Emotional Intelligence	0,873	13

As shown in Table 1, the reliability analysis of the scale of Artificial Intelligence is found to be 0,932, while the Cronbach's alpha values of its sub-dimensions are 0.741, 0.615, 0.899, 0.895, 0.884, 0.499, 0.838, respectively. The reliability result of the emotional intelligence scale is also determined to be 0.873. Therefore, it can be stated that the AI and EI scales are quite reliable.

Findings Regarding Demographic Features

Table 2: Demographic Information

Variables		N	%	Mean	Std. Deviation
Gender	Female	99	65.1		
	Male	53	34.9	1.34	0.478
Education Level	High school or below	16	10.5		
	Associate degree	3	2.0		
	Bachelor degree	77	50.7	3.13	0.891
	Master/doctorate	56	36.8		
Age	18-28	38	25.0		
	29-39	65	42.8		
	40-50	29	19.1	2.20	0.965
	51-61	20	13.2		
Merital Status	Married	49	32.2		
	Single	99	65.1	1.70	0.512
	Other	4	2.6		
		100	100		

As seen in Table 2 65.1% (99) of the 152 participants are female and 34.9% (53) of them are male. 10.5% (16) of the participants are high school or below graduates, 2% (3) of them are associate degree, 50.7% (77) of them are bachelor degree and 36.8% (56) have a master/doctorate degree. Thirty eight of the participants are between the ages of 18-28 years old, while 65 are the ages of 29-39. The remaining 29 participants are between the ages of 40-50 years old, and 20 are over 51 years old. When the marital status of the participants is examined, it has been found that 49 are married and 99 are single. 4 people are neither married nor single.

Relationships Between Variables

Table 3: Correlation Analysis Result Between Emotional Intelligence and Sub-Dimensions of Artificial Intelligence

	1	2	3	4	5	6	7	8
(1)Comprehen-siveness	1	0.761**	0.862**	0.749**	0.419**	0.481**	0.370**	**0.538****
(2)Format		1	0.746**	0.707**	0.412**	0.453**	0.404**	**0.546****
(3)Accuracy			1	0.822**	0.417**	0.527**	0.466**	**0.501****
(4)Reliability				1	0.598**	0.474**	0.513**	**0.522****
(5)Accessibil-ity					1	0.730**	0.458**	**0.420****
(6)Flexibility						1	0.632**	**0.482****
(7)Timeliness							1	**0.677****
(8)EI								1

** "Correlation is significant at the 0,01 level (2-tailed)."

Pearson correlation analysis is performed to test the relationships between the variables. The coefficient in Table 3 varies between 0.4 and 0.6. According to Table 3, a moderate correlation of 0.538 strength has been determined between EI and comprehensiveness. Also, it has been revealed that there is a moderate relationship with a strength of 0.546 between EI and format; with a strength of 0.501 between EI and accuracy; with a strength of 0.522 between EI and reliability; with a strength of 0.677 between EI and timeliness. In addition; it has been found that there is a low correlation with a strength of 0.420 between EI and accessibility; with a strength of 0.482 between EI and flexibility. This relationship (0.01) is significant at the level of significance. As a result of these results "$H_{1,}H_{2,}H_{3,}H_{4,}H_{5,}H_{6}$ and H_{7}" are accepted.

Table 4: Regression Analysis Result Between Emotional Intelligence and Sub-Dimensions Of Artificial Intelligence

Dependent Variable	Independent Variables	B	Std. Error	Beta	t	Sig.
Emotional Intelligence	Comprehensiveness	.332	.098	.391	3.40	**0.001**
	Format	.198	.080	.219	2.48	**0.014**
	Accuracy	-.149	.110	-.187	-1.35	0.178
	Reliability	-.068	.095	-.091	-.722	0.472
	Accessibility	.085	.073	.116	1.16	0.245
	Flexibility	-.120	.095	-.132	-1.25	0.211
	Timeliness	.503	.063	.608	8.02	**0.000**

When Table 4 is examined, it is found that EI explained comprehensiveness at the $\beta = 391$ level, so H_8 is accepted. Similarly; EI explained format and timeliness sub-dimensions at the $\beta = 219$, $\beta = 608$ level, respectively. Therefore, "H_9 and H_{14}" are accepted. However; since the explanatory level of the dimensions of accuracy $(p > 0,05)$, reliability $(p > 0,05)$, accessibility $(p > 0,05)$ and flexibility $(p > 0,05)$ can not be determined, $H_{10}, H_{11}, H_{12}, H_{13}$ are not supported.

In this article, t-test is done to compare the averages of two separate groups for a certain variable. However, it is determined that there is no difference between the averages of the two independent groups for the same variable. Similarly, ANOVA test is conducted to test whether the means of more than two groups are equal to each other. ANOVA test generalizes the t-test for two groups for more than two groups. Table 5 shows ANOVA test result.

Table 5: ANOVA Results Regarding the Variables

Variable	Factor	F value	Significant
Education level	Comprehensiveness	13.574	**0.000**
	Accuracy	4.227	**0.000**
	Reliability	7.313	**0.000**
	Accessibility	7.026	**0.000**
	Flexibility	4.323	**0.000**
	Timeliness	3.565	**0.000**
	EI	2.658	**0.000**
Age	Comprehensiveness	2.307	**0.019**
	Format	4.364	**0.000**
	Accuracy	3.629	**0.000**
	Reliability	7.510	**0.000**
	Accessibility	3.591	**0.000**
	Flexibility	5.118	**0.000**
	Timeliness	6.730	**0.000**
	EI	3.642	**0.000**

*All Levene statistics are meaningless at the 5% level.

Table 6: LSD Results According to The Factor Levels of the Variables

Variable	Factor	Level group	Mean	Sign.
Education	Comprehensi-veness	High school or below&Associate degree	2.250*	**0.000**
		High school or below&Bachelor degree	0.778*	**0.000**
		High school or below&Master/doctorate	0.744*	**0.000**
		Bachelor degree&Master/doctorate	1.47*	**0.001**
	Accuracy	High school or below&Associate degree	2.18*	**0.000**
		High school or below&Bachelor degree	0.698*	**0.001**
		High school or below&Master/doctorate	0.556*	**0.012**
		Bachelor degree&Associate degree	1.489*	**0.001**
		Master/doctorate&Associate degree	1.630*	**0.001**
	Reliability	High school or below&Associate degree	2.43*	**0.000**
		High school or below&Bachelor degree	0.534*	**0.018**
		Bachelor degree&Associate degree	1.90*	**0.000**
		Master/doctorate&Associate degree	2.15*	**0.000**
	Accessibility	High school or below&Associate degree	2.33*	**0.000**
		High school or below&Bachelor degree	0.848*	**0.000**
		Bachelor degree&Associate degree	1.48*	**0.002**
		Master/doctorate&Associate degree	2.09*	**0.000**
	Flexibility	High school or below&Associate degree	1.45*	**0.001**
		Bachelor degree&Associate degree	1.28*	**0.002**
		Master/doctorate&Associate degree	1.44*	**0.001**
	Timeliness	High school or below&Associate degree	1.75*	**0.000**
		Bachelor degree&Associate degree	1.75*	**0.000**
		Master/doctorate&Associate degree	2.07*	**0.000**
		Master/doctorate&Bachelor degree	0.313*	**0.017**
	EI	High school or below&Associate degree	1.59*	**0.000**
		Bachelor degree&Associate degree	1.50*	**0.000**
		Master/doctorate&Associate degree	1.61*	**0.009**
Age	Comprehensi-veness	18-28&40-50	0.449*	**0.017**
		29-39&40-50	0.472*	**0.006**

	41-51&40-50	0.645*	**0.004**
Format	29-39&18-28	0.521*	**0.000**
	29-39&40-50	0.769*	**0.000**
	41-51&18-28	0.414*	**0.025**
	41-51&40-50	0.662*	**0.001**
Accuracy	18-28&40-50	0.632*	**0.002**
	29-39&40-50	0.638*	**0.000**
	41-51&40-50	0.647*	**0.006**
Reliability	18-28&40-50	0.844*	**0.000**
	29-39&40-50	0.828*	**0.000**
	41-51&40-50	0.520*	**0.030**
Accessibility	29-39&40-50	0.500*	**0.012**
Flexibility	29-39&40-50	0.347*	**0.032**

*Sign.=Significant

**As a result of the ANOVA test, only significant level groups are reported.

It is made inferences that there is a significant difference in the comprehensiveness, accuracy, timeliness, reliability, accessibility and flexibility dimensions of the AI scale according to the education levels of the participants. According to the test results, those who have university, master and doctorate degrees are aware that AI's speed, comprehensiveness, confidence, and the possibility of being mistaken is low. Because the higher the education level, the higher the trust in technology. Increased confidence in technology will trigger its use. Thus, awareness of its comprehensiveness, accuracy, and speed will develop.

A difference has been found in terms of age of the participants in terms of comprehensiveness, format, accuracy, reliability, accessibility and flexibility. This difference is statistically significant. It has been determined that the difference stems from the participants between the ages of 29-50. Participants in this age range are aware of the capabilities of AI. Because they have a certain experience and business competence. They can follow the most up-to-date developments in the business world and try to add the necessary qualifications to themselves and their institutions. It is not

surprising that the difference stems from participants in this age range, as AI has emerged as the latest innovation in all existing sectors.

CONCLUSION

EI has become quite popular in predicting individual and organizational success. AI has also entered the business world. Machines are used in the business world. This situation is called transformational evolution. Given the widespread use of EI and AI, it is critical to examine how individuals are affected. AI and EI are needed in most organizations. Despite the prevalence of advanced technologies, employees with high EI are needed. Individuals with high levels of EI can have a more positive experience in performance. For individuals to have a good experience, they must produce emotional labor that requires appropriate behavioral strategies. Emotional labor strategies can produce positive organizational results.

This research investigated the relationship between EI and AI, and how EI affects thoughts about AI. As a result of the correlation analysis, it has been determined that there is a significant relationship between EI and AI dimensions of comprehensiveness, format, accuracy, reliability, accessibility, flexibility and timeliness. In addition, as a result of the regression analysis, it has been determined that there is a significant cause-effect relationship between EI and the dimensions of comprehensiveness, format and timeliness. Lona et al. (2020) reached a similar conclusion by stating that there is a relationship between EI and comprehensiveness and simplicity. Although theoretically, individuals with sound EI may place great emphasis on comprehensiveness and integrity. Geher et al. (2017) claimed that accuracy is a fundamental aspect of EI. This skill is essential in the way people relate to one another at various levels of relationship. Accuracy is also identified with comprehension, expression and communication skills. Each of these is crucial for navigating the right and positive ways in social situations. These aspects of EI predict many important life outcomes. Ertaş and Kıraç (2019) reached a similar conclusion with this study, claiming that EI affects reliability. EI is an emotion that helps people to understand and connect more clearly. This feeling also affects people's skills such as reliability, speaking and listening. In addition, people with high EI will have abilities such as high motivation, entrepreneurship, proactivity, innovative thinking and creativity. Wu et al. (2020) claimed that EI affects cognitive

flexibility. EI and cognitive flexibility can contribute to high subjective well-being. Low cognitive flexibility can contribute to low subjective well-being. From a research perspective, this is one of the first studies to reveal the relationship between different types of intelligence. Similarly, Prentice et. al. (2020), claimed that there is a relationship between EI and AI and this relationship increases organizational performance. As a result of this study, it has been proven that human intelligence is superior and dominant than machine intelligence. In addition, this article can extend the technical and functionality oriented AI research in a theoretical context.

REFERENCES

[1] Barrett, L. F. (2019). "Emotional expressions reconsidered: challenges to inferring emotion from human facial movements." *Psychological Science in the Public Interest,* 20(1), pp. 1-68.

[2] Buhalis, D. & Leung, R. (2018). "Smart hospitality – Interconnectivity and interoperability towards an ecosystem." *International Journal of Hospitality Management,* 71, pp. 41 –50.

[3] Chui, M., Manyika, J. & Miremadi, M. (2016). "Where machines could replace humans - And where they can't (yet)", https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights /where-machines-could-replace-humans-and-where-they-cant-yet, Online Assessible: 05.22.2021.

[4] D'Amato, A. & Herzfeldt, R. (2008). "Learning orientation, organizational commitment and talent retention across generations: A study of European managers." *Journal of Managerial Psychology,* 23(8), pp. 929–953.

[5] Eminoğlu, Y. (2019). "Duygusal yapay zekâ: Tasarlanmış empati", https://www.projesoft.com.tr/yapay-duygusal-zekaemotion-ai-tasarlanmis-empati/ Online Assessible: 05.11.2021.

[6] Ertaş, H. & Kıraç, R. (2019). "Sağlık yönetimi öğrencilerinin liderlik ve duygusal zeka düzeylerinin incelenmesi." *EKEV Akademi Dergisi,* 23(80), pp. 247-262.

[7] Geher, G., Betancourt, K. & Jewell, O. (2017). "The link between emotional intelligence and creativity." *Imagination, Cognition and Personality,* 37(1), pp. 5-22.

[8] Goleman, D. (2012). Emotional intelligence: Why it can matter more than *IQ*. Bantam.

[9] Gürbüz, Ş. & Şahin, F. (2017). *Sosyal Bilimlerde Araştırma Yöntemleri* (4. Baskı), Seçkin Yayıncılık, Ankara.

[10] Hilovska, K. & Koncz, P. (2012). "Application of artificial intelligence and data mining techniques to financial markets." *Economic Studies & Analyses / Acta VSFS,* 6(1), pp. 62-76.

[11] He, D. & Guo, V. (2018, September 14), "4 ways AI will impact the financial job market. World Economic Forum", https://www.weforum.org/agenda/2018/09/4-ways-ai-artificial intelligenceimpact-financial-job-market/, Online Assessible: 22.05.2021.

[12] Huang, M.H. & Rust, R. T. (2018). "Artificial intelligence in service.", *Journal of Service Research,* 21(2), pp. 155–172.

[13] Kambur, E. (2018). "Does emotional intelligence affect quality of service?: An application in the service sector." *The Journal of Academic Social Science,* 6(71), pp. 587-600.

[14] Kaplan, A. & Haenlein, M. (2019). "Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence." *Business Horizons,* 62, pp. 15–25.

[15] Law, K. S., Wong, C.-S. & Song, L. J. (2004). "The construct and criterion validity of emotional intelligence and its potential utility for management studies." *Journal of Applied Psychology,* 89(3), pp. 483–496.

[16] Lee, J. J. & Ok, C. (2012). "Reducing burnout and enhancing job satisfaction: Critical role of hotel employees' emotional intelligence and emotional labor." *International Journal of Hospitality Management,* 31(4), pp. 1101–1112.

[17] Lona, W.A.V., Fanggidae, R.E., Nursiani, N.P. & Maak, C. (2020). "The influence of emotional intelligence, intellectual intelligence, spiritual intelligence on employee performance." *Advances in Economics, Business and Management Research,* 158, pp. 538-545.

[18] Makridakis, S. (2017). "The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms." *Futures,* 90, pp. 46-60.

[19] Mayer, J. D. & Salovey, P. (1990). "Perceiving affective content in ambiguous visual stimuli: A component of emotional intelligence." *Journal Of Personality Assessment,* 54, pp. 772-781.

[20] Mayer, J. D., Salovey, P., Caruso, D. R. & Sitarenios, G. (2001). "Emotional intelligence as a standard intelligence." *Emotion,* 1(3), pp. 232–242.

[21] Morikawa, M. (2017). Who are afraid of losing their jobs to artificial intelligence and robots? Evidence from a survey. *Japan: Research Institute of Economy, Trade and Industry (RIETI).*

[22] Nabiyev, V.V. (2013). *Yapay Zeka-Problemler-Algoritmalar* (5. Baskı), Seçkin Yayıncılık, Ankara.

[23] OECD (2016). "Automation and independent work in a digital economy",https://www.oecd.org/employment/Policy%20brief%20-%20Automation%20and%20Independent%20Work%20in%20a%20Digital%20Economy.pdf, Online Assessible: 22.05.2021.

[24] Özdamar, K. (2015). *Paket Programlar ile İstatistiksel Veri Analizi* (10. Baskı), Nisan Kitabevi Yayınları, Ankara.

[25] Perez, J. A., Deligianni, F., Ravi, D. & Yang, G. (2018). "Computing Research Repository." *Artificial Intelligence and Robotics,* 1803, pp. 2-44.

[26] Pessoa, L. (2017). "Do intelligent robots need emotion?" *Trends in Cognitive Sciences,* 21(11), pp. 817-819.

[27] Prentice, C., Lopes, S. D. & Wang, X. (2020). "Emotional intelligence or artificial intelligence– an employee perspective." *Journal of Hospitality Marketing & Management,* 29(4), pp. 377-403.

[28] Robinson, M. (2017, June 13.) "This robot-powered restaurant is one step closer to putting fast-food workers out of a job", https://www.businessinsider.com.au/momentum-machines-funding-robotburger-restaurant-2017-6, Online Assessible: 05.22,2021.

[29] Rozell, E. J., Pettijohn, C. E. & Parker, R. S. (2004). "Customer-oriented selling: Exploring the roles of emotional intelligence and organizational commitment." *Psychology & Marketing,* 21(6), pp. 405–424.

[30] Russell Stuart, J. & Norvig, P. (2009). *Artificial intelligence: A modern approach.* USA: Prentice Hall.

[31] Russell, S. J. & Norvig, P. (2016). *Artificial intelligence: a modern approach.* Malaysia.

[32] Schutte, N. S., Malouff, J. M., Thorsteinsson, E. B., Bhullar, N. & Rooke, S. E. (2007). "A meta-analytic investigation of the relationship between emotional intelligence and health." *Personality and individual differences,* 42(6), pp. 921-933.

[33] Seven, E. (2019). "Duyguzal zeka ve duygusal zekanın tüketicilerinin hedonik satın alma davranışına etkisi" Yüksek lisans tezi, Uludağ Üniversitesi, Bursa.

[34] Shi, Y., Prentice, C. & He, W. (2014). "Linking service quality, customer satisfaction and loyalty in casinos, does membership matter?" *International Journal of Hospitality Management,* 40, pp. 81 –91.

[35] Simon, H. A. (1980). "Cognitive science: The newest science of the artificial." *Cognitive Science,* 4(1), pp. 33–46.

[36] Stoicescu, C. (2015). "Big Data, the perfect instrument to study today's consumer behavior." *Database Systems Journal,* VI (3), pp. 29-39.

[37] Strange, T. (2019). "How will studying cognitive development shape the nest big innovation in AI?" https://cbmm.mit.edu/news-events/news/how-will-studying-cognitive-development-shape-next-big-innovation-ai-it-pro-portal, Online Assessible: 05.11.2021.

[38] Wirth, N. (2018). "Hello marketing, what can artificial intelligence help you with?" *International Journal of Marketing Research,* 60(5), pp. 435–438.

[39] Wixom, B. H. & Todd, P. A. (2005). "A theoretical integration of user satisfaction and technology acceptance." *Information Systems Research,* 16(1), pp. 85–102.

[40] Wu, C-W., Chen, W-W. & Jen, C-H. (2021). "Emotional intelligence and cognitive flexibility in the relationship between parenting and subjective well-being." *Journal of Adult Development,* 28, pp. 106-115.

[41] Yao, S., Wang, X., Yu, H. & Guchait, P. (2019). "Effectiveness of error management training in the hospitality industry: Impact on perceived fairness and service recovery performance." *International Journal of Hospitality Management,* 79, pp. 78 –88.