Erciyes İletişim Dergisi / Journal of Erciyes Communication
e-ISSN: 2667-5811 | ISSN: 1308-3198

Research Article | Araştırma Makalesi

Communication Faculty Students' Metaphorical Perceptions of Agorithms and Artificial Intelligence (AI)

İletişim Fakültesi Öğrencilerinin Algoritmalar ve Yapay Zekaya Yönelik Metaforik Algıları

Yunus ERGEN (Asst. Prof. Dr.)
Hatay Mustafa Kemal University, Faculty of Communication
Hatay/Türkiye
yeergen@gmail.com

Başvuru Tarihi | Date Received: 01.02.2025
Yayına Kabul Tarihi | Date Accepted: 19.04.2025
Yayınlanma Tarihi | Date Published: 30.07.2025

Ergen, Y. (2025). Communication Faculty Students' Metaphorical Perceptions of Agorithms and Artificial Intelligence (AI). *Erciyes İletişim Dergisi, 12*(2), 361-381 https://doi.org/10.17680/erciyesiletisim.1631086

Abstract

Algorithms and artificial intelligence (AI) are among the core areas of interest in media and communication research. In an era in which content creation is continuous, the media and communication sectors benefit significantly from these technologies. Within this framework, the perspectives of students in communication faculties, which also provide vocational education to train qualified professionals, are particularly important for understanding their attitudes toward algorithms and AI. This study aimed to identify the general perceptions of communication faculty students regarding AI and the algorithms that form its foundation. To achieve this, a phenomenological research design within the qualitative paradigm was employed, and a structured "algorithms and AI metaphor form" was administered to 63 communication faculty students. The collected data were analyzed using content analysis. As a result, 33 metaphors for algorithms and 32 for AI were identified, indicating a predominantly positive attitude toward both phenomena. The metaphors were categorized into five themes: "systematization," "humanization," "functionalization," "abstraction," and "other." The findings suggest that, while algorithms are perceived with a more systematic approach, AI is more strongly associated with human-like qualities, reflecting diverse metaphorical perceptions of both phenomena.

Keywords: Algorithms, Artificial Intelligence (AI), Metaphor Analysis, Metaphorical Perception, Faculty of Communication.

Öz

Algoritmalar ve yapay zekâ, medya ve iletişim disiplininin temel ilgi alanlarından biridir. Özellikle içerik üretim sürecinin daimî olduğu bir dönemde medya ve iletişim sektörü algoritmalardan ve yapay zekâdan ciddi ölçüde istifade etmektedir. Sektöre nitelikli eleman yetiştirmek amacıyla mesleki eğitim de veren iletişim fakültelerindeki öğrencilerin algoritmalar ve yapay zekâyla ilgili görüşleri bu kapsamda önem arz etmektedir. Bu itibarla çalışmada, yapay zekâ ve onun temelini oluşturan algoritmalarla ilgili iletişim fakültesi öğrencilerinin genel kanaatlerinin tespit edilmesi hedeflenmiştir. Söz konusu hedefe ulaşmak için nitel paradigmadan fenomenolojik araştırma deseni tercih edilmiş ve yapılandırılmış bir şekilde oluşturulan "algoritmalar ve yapay zekâ metafor formu" 63 iletişim fakültesi öğrencisine doldurtulmuştur. Verilerin analizi için içerik analizi tekniğinden istifade edilmiştir. Araştırma sonucunda algoritmalara yönelik 33 metafor, yapay zekâya yönelik ise 32 metafor elde edilmiştir. Üretilen metaforlardan hareketle her iki fenomene yönelik büyük ölçüde olumlu bir tutuma sahip olunduğu tespit edilmiştir. Metaforların anlamsal içeriği 5 farklı temada kategorize edilerek analiz gerçekleştirilmiştir. Bu temalar "sistematikleştirme", "insanlaştırma", "işlevselleştirme", "soyutlaştırma" ve "diğer" şeklinde belirlenmiştir. Sonuçlar her iki fenomene yönelik metaforik algıların çeşitlilik arz ettiğini, algoritmalar için daha sistematik bir yaklaşım söz konusuyken yapay zekânın insansı yönüne vurgunun daha yoğun olduğunu göstermektedir.

Anahtar Kelimeler: Algoritmalar, Yapay Zekâ (YZ), Metafor Analizi, Metaforik Algı, İletişim Fakültesi.

Introduction

Recently, during a class at the Faculty of Communication, I engaged in discussions with senior students about emerging AI tools. As the discussion progressed, one of them remarked, "ChatGPT is now one of our classmates! We've even prepared a graduation robe for it, and it will toss its cap with us at the ceremony!" This sarcastic comment encapsulated the perspective that my students held regarding AI. When similar sentiments were echoed by other students, it became evident that AI was seamlessly integrated into their everyday lives. Remarkably, this technology, which is rooted in decades of development, has only recently become a tangible and integral aspect of their daily experience.

It is not surprising that my students, most of whom were born after the millennium and are referred to as Generation Z (Akduman & Hatipoğlu, 2021; Chan & Lee, 2023; Szymkowiak vd., 2021), digital natives (Prensky, 2001a, 2001b), and the i-Generation (Twenge, 2018), quickly embrace this new technology and incorporate it as an ordinary part of their daily lives. They represent a generation that grew during a period of rapid technological advancement (Bencsik vd., 2016; Sözer, 2021). Unlike digital immigrants, for whom digital technology emerges later in life, digital natives naturally perceive each new technological innovation as an easily adoptable advancement. In contrast, older generations, who were introduced to the digital world at a later stage, have had different experiences, with digital life gradually becoming part of their existence (Karabulut, 2015; Prensky, 2001a, 2001b). Accordingly, it is expected that the meaning attributed to new technologies, such as AI and the algorithms that underpin it, will differ significantly from the perspectives of earlier generations.

Algorithms and AI are pivotal for the advancement of digital technologies (Jarrahi, 2018; Koebe, 2025; Makridakis, 2017; Reiss vd., 2021; Roy vd., 2025). As algorithms continue to evolve, the scope of AI applications has expanded. Moreover, few domains remain untouched by AI (Dwivedi vd., 2021, 2023; Hülür & Ölçer, 2025). In the media and communication sector, where content serves as a cornerstone, AI is employed across nearly all stages of creation (Dralega, 2023; Jha, 2024; Sudmann & Schröter, 2023; Valenzuela, 2024). In news creation processes, image generation, press release composition, campaign design, video creation, editing, advertising, or filmmaking, generative AI is now integral to numerous workflows (Huh vd., 2023; Kreps vd., 2022; Nguyen, 2023; Ouchchy vd., 2020; Porlezza, 2023; Roe & Perkins, 2023). In an era of uninterrupted content creation, algorithms and AI contribute significantly to shaping perceptions at both societal and individual levels. The influence of these technologies in the media and communication domains emerges as a subject worthy of in-depth analysis, particularly through the lens of communication faculty students' metaphorical interpretations of these concepts. Therefore, this study seeks to explore the perceptions and conceptual understanding that communication faculty students associate with algorithms and AI through the metaphors they employ. Furthermore, it aims to analyze how these students conceptualize technological transformation and position themselves within this evolving landscape.

The literature includes studies that examine metaphorical perceptions of AI (Erdoğan & Bozkurt, 2023; Saçan vd., 2022; Xu & Tan, 2024; Yan vd., 2024), some of which specifically focus on university students (Altuntaş & Karabay, 2024, 2024; Uçkun & Konak, 2023). However, no comparable research has been identified that explored metaphorical perceptions of algorithms. In addition, most metaphorical perception studies tend to

focus on a single phenomenon. This study stands apart by targeting communication faculty students and investigating their metaphorical perceptions of two distinct, yet interconnected phenomena: algorithms and AI. Furthermore, this study is expected to make a significant contribution to literature as the first to address the metaphorical perception of algorithms.

Method and Research Design

A phenomenological design from the qualitative paradigm was preferred in this study. Phenomenology is a design that allows researchers to develop an in-depth perspective of the phenomenon being studied. The aim of this design is to understand individuals' experiences related to the phenomenon under investigation and to explore how these experiences shape their daily lives. Phenomenology, also referred to as phenomenological research, focuses on how people perceive and make sense of the world, as is the case with other designs in the qualitative research paradigm (Creswell, 2013, 2017; Merriam, 2018). Accordingly, phenomenology is understood to be rooted in experience and perception. This research aims to reveal the metaphorical perceptions of communication faculty students toward two interrelated phenomena, algorithms and AI. Therefore, phenomenology is considered the most appropriate design for this purpose. Metaphors are cognitive tools that perceive, shape, and guide ideas regarding the formation and functioning of processes, events, and phenomena. They not only make ideas more vivid and engaging but also influence perceptions and understanding (Lakoff & Johnson, 2003; Saban, 2010). Accordingly, examining the role of metaphors in shaping perceptions and thought structures is crucial for understanding their impact and function in various contexts. In line with this perspective, this study analyzes the meanings that communication faculty students attribute to the concepts of algorithms and AI as well as the reasons behind the creation or adoption of these meanings. This study seeks to answer the following questions:

- **RQ1**: Which metaphors do communication faculty students use to share their thoughts and perceptions about algorithms and AI?
- **RQ2:** Which cognitive, emotional, and contextual factors shape participants' attitudes towards the metaphors they produce regarding algorithms and AI?
- **RQ3**: Which thematic distinctions do metaphors focus on thoughts about algorithms and AI?

Ethics Committee Permission

Within the framework of the decision taken during the meeting by Hatay Mustafa Kemal University Social and Human Sciences Scientific Research and Publication Ethics Committee dated 07.11.2024 and numbered 25; the study does not contain any ethical issues.

Participants

Since this research focuses on communication faculty students, the study population comprises communication faculties. In Türkiye, communication faculties provide vocational education aimed at training professionals for the media and communication sector. The continuous content creation process in this sector, which inherently demands creativity, necessitates the integration of algorithms and AI in content creation. As a result, students are introduced to the structure and usage patterns of these technologies during their education, prior to entering the industry. As a scholar working in a communication

faculty, I observed that many of my students possess knowledge about algorithms and actively use at least one AI tool. Through discussions with my students, I noticed significant variation in their perspectives on these technologies. From this observation, I concluded that exploring the metaphorical meanings communication faculty students attribute to algorithms and AI would provide valuable insights. Accordingly, the sample for this research consisted of students from the Faculty of Communication at Hatay Mustafa Kemal University, where I am employed.

The research was conducted with 63 students enrolled in the departments of journalism, radio, television, and cinema, as well as public relations and publicity, during the fall semester of 2024. A purposive sampling strategy commonly employed within the qualitative research paradigm was used to select participants. Initially, data was collected from 76 students voluntarily in line with the research objectives. However, the metaphors provided by some participants were excluded because of a lack of meaningfulness or insufficient justification. Consequently, the responses of 63 participants deemed meaningful and valid were included in the analysis. It should be noted that there is no definitive standard for sample size in metaphorical perception studies. While some studies employed very large sample sizes (Abate & Ado, 2024; Benczes & Ságvári, 2018; Reali & Arciniegas, 2015)hereafter I will use azmari for singular and azmariwot integral for plural, most used smaller sample sizes (Bakhtiar, 2017; Bartczak & Bokus, 2015; Ganji, 2011; Leung vd., 2021; Schröder, 2009)in recent years, have relied on metaphorical language to persuade Iranian women to dress modestly in public. The present paper, based on Kovecses's (2015. In this study, the "data saturation" criterion, widely recognized in qualitative research, was used to determine an appropriate sample size range (Creswell, 2013, 2017; Merriam, 2018; Neuman, 2020). The sample comprised 30.16% male and 69.84% female students. No deliberate effort was made to ensure gender balance; gender distribution was random. Participants' ages ranged from 20 to 56 years, with a mean age of 23.34 years.

One of the primary limitations of this study is that it was conducted with students from a single faculty. This limitation is significant. Nevertheless, focusing on the students of Hatay Mustafa Kemal University, a university characterized by substantial cultural diversity due to its unique geographical location, provides a diverse range of data. Given that the Faculty of Communication's student body also reflects this cultural diversity, the data collected in this study can be argued to adequately represent the perspectives of faculty students regarding algorithms and AI. In other words, the varied perspectives of students from different cultural backgrounds contributed to data diversity.

Data Collection Tools

A structured interview form was developed to gather metaphorical data. The form was designed based on similar studies (Bakhtiar, 2017; Benczes & Ságvári, 2018; Saban, 2010; Uslu, 2019). The participants were first provided with information about the purpose of the research. Subsequently, they were asked to complete the sections which required their consent to participate. Those who agreed to participate were instructed to fill in the blanks in two separate sentence structures, each addressing one of the two phenomena: algorithms and AI. The two statements used were: "Algorithms, such as _____. Because _____." and "Artificial intelligence is like _____. Because _____." The participants were asked to complete the sentences by filling them in blank spaces. This approach aimed to determine the metaphorical meanings that the participants attributed to both phenomena as well as the reasoning behind their choices. Before the forms were

completed, the researcher provided information about metaphors and metaphorical perception research to the participants but refrained from offering any guidance to ensure that the data collection process was unbiased. Furthermore, no example of a guiding metaphor was included in this form. This was done intentionally to ensure that the data obtained would reflect an organic outcome free from external influence.

Data Analysis, Validity and Reliability

Content analysis is a commonly used technique in metaphorical perception studies for analyzing collected data (Aktan vd., 2020; Ayyıldız, 2016; Çoğaltay & Aras, 2018; Uslu, 2019). Content analysis, which necessitates a comprehensive examination of the data, aims to uncover previously hidden themes through coding (Drisko vd., 2015; Krippendorff, 2019; Neuman, 2020). In this study, content analysis was employed to analyze the data, as this method was aligned with the research objectives. First, the responses of the participants to the structured interview form were transcribed separately for each phenomenon, ensuring that the views of each participant were included. These transcriptions were then transferred into the MAQXDA program to transform them into meaningful expressions and to facilitate the necessary coding process. The data were analyzed using the program's capabilities, and redundant expressions, conjunctions, stop words, and other irrelevant elements were excluded. Following this parsing and sorting process, the data were organized and categorized for further analysis. Quantitative and qualitative analyses of the data were performed. The analysis aimed to examine participants' attitudes towards both phenomena to determine their approaches to the metaphors. In this context, the metaphors were categorized into three distinct groups: "negative," "positive," and "neutral." Metaphors with positive connotations were assigned to the "positive" category, those with negative connotations were classified as "negative," and metaphors that did not convey clear positive or negative connotations were categorized as "neutral." Finally, the metaphors associated with both algorithms and AI were analyzed under five distinct themes. Thematic categorization was guided by underlying cognitive orientations reflected in the participants' metaphors. Although certain metaphors could arguably align with multiple thematic categories, each was assigned a single theme based on its predominant meaning orientation. This methodological decision ensured both analytical consistency in processing the dataset and conceptual clarity in the presentation of findings. The themes and their respective contents are as follows:

Systematization: This theme encompasses metaphors that highlight the regular, systematic, and structured operation of algorithms and AI. Participants generally perceive the metaphors they create for the phenomena under study as representing a "road," "system," "map," or "planning tool." These metaphors suggest that participants attempted to comprehend the operational logic of algorithms and AI within an organized framework.

Humanization: This theme encompasses metaphors that attribute human qualities to algorithms and AI. Participants described the metaphors they generated as "brain," "human," "intelligent teacher," or "system imitating human." These metaphors suggest that participants attributed human-like characteristics to these technologies, perceiving them as resembling humans in some way.

Functionalization: This theme encompasses metaphors that emphasize the functional aspects of algorithms and AI. The metaphors created by participants were predominantly

associated with practical tools, such as "convenience," "memory," "security camera," or "dictionary." This highlights the benefits and convenience offered by these technologies in daily life.

Abstraction: This theme includes metaphors that highlight the abstract, imaginary, or mystical aspects of algorithms and AI. Participants described these phenomena using more metaphysical and abstract terms, such as "dream," "universe," "astral dimension," or "extraordinariness." These metaphors suggest that participants' perceptions of the unknowability of these new technologies played a significant role in shaping their understanding.

Other: This theme encompasses metaphors that are challenging to categorize within a specific context but remain meaningful.

The structured interview form was reviewed by two independent evaluators to ensure the validity and enhance the reliability of the research. Following this review, evaluators were asked to consolidate similar expressions. This process incorporated evaluators' feedback to increase the significance of the coding procedure. Furthermore, during coding, productive AI tools were utilized to obtain more meaningful results. The metaphors created in this framework were transferred to ChatGPT and coding was requested in accordance with the coding chart. As a result of the expert opinions obtained and the coding made through AI, the draft themes were finalized, and the coding process was carried out separately for both phenomena through MAXQDA. To further enhance the reliability of the study, the principle of "consistency," recommended in qualitative research, was applied (Merriam, 2018). In this respect, careful attention was paid to ensure that the data collected, and the conclusions drawn were both compatible and consistent.

Results

This section presents an analysis of the metaphors formed based on data collected from communication faculty students regarding algorithms and AI through a structured interview form. The data were organized into tables and graphs to facilitate a better understanding of the analyses. While the metaphors generated for both phenomena were interrelated, the findings were presented under two distinct headings to avoid confusion.

Metaphors Created for Algorithms

As a result of the analysis, 33 distinct and meaningful metaphors related to the algorithms were identified (Table 1). Among these, the most frequently cited metaphors include "road," "problem solving," "mathematics," "system," "puzzle," "step," "map," "human," and "personal information."

***Table 1**. Overview of Participants' Metaphors for Algorithms*

Metaphors	f	%	Metaphors	f	%	Metaphors	f	%
Road	9	14,29	Orientation to spiritual life	1	1,59	Dream	1	1,59
Problem solving	8	12,70	Healthy eating	1	1,59	Concluding event	1	1,59
Mathematics	5	7,94	Food recipe	1	1,59	Thought tracking device	1	1,59
System	5	7,94	Universe	1	1,59	Filter	1	1,59
Puzzle	3	4,76	Marketer	1	1,59	Convenience	1	1,59
Step	3	4,76	Mirror	1	1,59	Program	1	1,59

Metaphors	f	%	Metaphors	f	%	Metaphors	f	%
Map	2	3,17	Love	1	1,59	Planning tool	1	1,59
Human	2	3,17	Computer	1	1,59	An inseparable whole	1	1,59
Personal information	2	3,17	Objective	1	1,59	Real life	1	1,59
Struggle	1	1,59	Father	1	1,59	Our reflection	1	1,59
Sky	1	1,59	Security camera	1	1,59	Memory	1	1,59

In the metaphors created for algorithms, participants' varying perceptual frameworks and the ways they symbolize these structures are evident. The most commonly created metaphors provide significant insights into the functional and abstract perceptions of algorithms. The metaphor of "road" (14.29%), the most frequently cited, suggests that participants view algorithms as a form of guidance or direction. In other words, algorithms are perceived as tools that lead participants toward a specific goal in the problem-solving process. Given that the participants were communication faculty students, it is unsurprising that they described algorithms as a "road." These students, through their education, address the fundamental operations of media and communication, engaging in guidance and solution-oriented processes such as advertising and public relations. Thus, the metaphor of "road" is linked to the metaphor of "problem solving," which ranks as the second most frequent metaphor created. The justifications provided by participants who used the road metaphor were generally consistent: "Algorithms are like a road to a solution. Because they are applied in steps" (P35); "Algorithms are like a road. Because it follows the stages of a task" (P38); "Algorithms are like a road followed for a purpose. Because there are roads followed for a purpose" (P55).

The second most frequently occurring metaphor, "problem solving" (12.70%), similarly suggests that algorithms are tools for producing solutions. Participants perceived algorithms as logical and systematic structures created to address specific problems. Given their academic background, communication students may view algorithms as instruments for solving complex issues or for generating creative projects. This metaphor reflects an emphasis on analytical thinking fostered in academic training. The justifications provided for this metaphor closely mirror those given for the previous one: "Algorithms are problem-solving steps. Because we use them in problem-solving" (P45); "Algorithms are like solving problems. Because they are solution-oriented" (P65); "Algorithms are like problem solving and solutions. Because they design roads toward a solution" (P41).

The third most frequently created metaphors for algorithms are "mathematics" and "system," which were both cited at a rate of 7.94%. These metaphors further indicate that communication students have developed a technical understanding of algorithms. It is evident that communication faculty students have acquired the ability to interpret technological advancements, leading them to appreciate the structured and organized nature of algorithms.

Although the overall attitude of participants towards algorithms (Figure 1) is predominantly positive, it is evident that a small proportion adopt a more critical approach, with some metaphors reflecting a neutral perspective. More than half of the participants (54.55%) expressed a positive attitude towards algorithms. Participants commonly associated algorithms with guiding, constructive, and solution-oriented concepts such as "road," "problem solving," "step," and "map." These metaphors suggest that algorithms are perceived as organizing and supportive mechanisms by the students. Conversely, negative

metaphors (18.18%) reflected a critical stance towards the algorithms. Metaphors such as personal information, "struggle," "thought tracking device," and "security camera" highlight concerns regarding privacy and surveillance. Neutral metaphors (27.27%), such as "mathematics," "system," and "program," represent more objective and functional viewpoints, reflecting the perception of algorithms as technical tools.

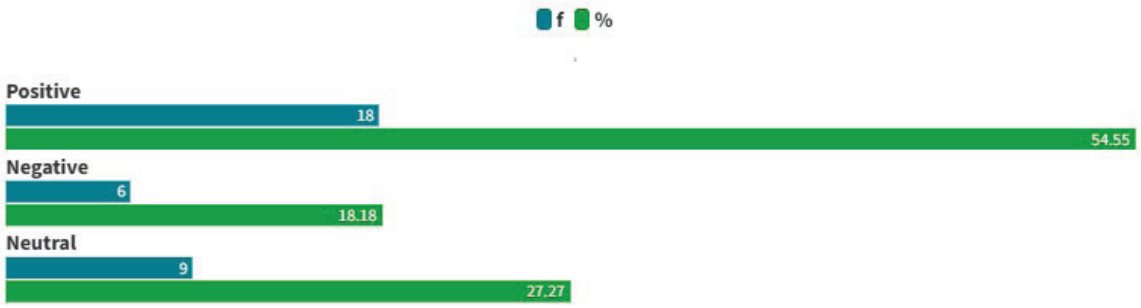

Figure 1. *Attitudes towards Metaphors Created for Algorithms*

A thematic analysis of the metaphors generated for the algorithms is shown in Figure 2. The analysis revealed that the majority of participants viewed algorithms through a systematization-oriented lens (33.33%). Metaphors such as the "road," system, "problem solving," and "mathematics" suggest that algorithms are perceived as guiding elements in organizational, analytical, and solution-generating processes. The second most prominent theme is humanization (24.24%), which associates algorithms with human-like qualities and emotional connections, as evidenced by metaphors like "human," "our personal information," and "father." The abstracting theme (21.21%), which includes metaphors like "sky," "mirror," and "dream," reflects the perception of algorithms as concepts that engage abstract and profound thought processes. The functionalization theme (15.15%), representing a less dominant perspective, emphasizes the practical and functional aspects of algorithms as tools. Lastly, the "Other" theme (6.06%) encompasses metaphors that are context-specific and individually tailored, reflecting more unique or personal interpretations.

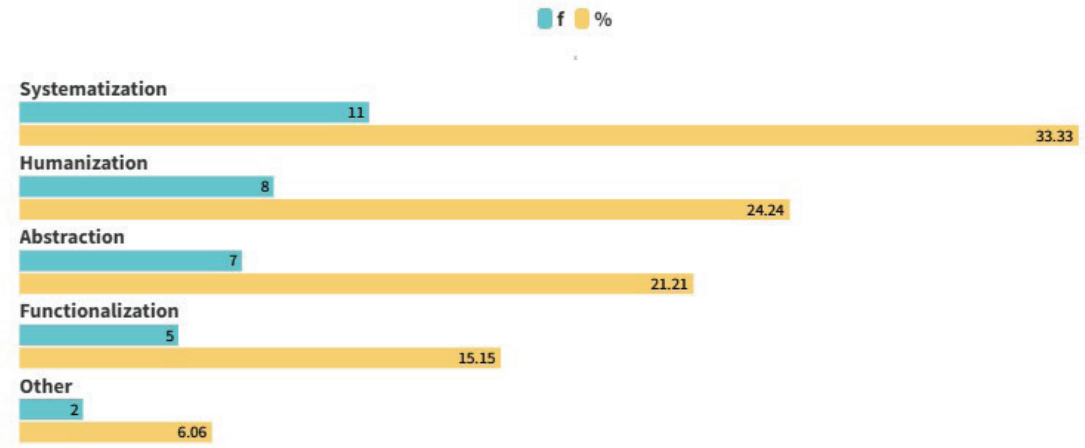

Figure 2. *Distribution of Metaphors Created for Algorithms According to Themes*

The thematic distribution of participants' metaphors for algorithms reveals a predominantly systematic perspective, indicating an awareness of the foundational role of algorithms in structuring, organizing, and solving problems. This systematic view reflects

the participants' appreciation of algorithms as tools for creating order and achieving goals in a methodical manner. Supporting this perspective, participants described algorithms in statements such as: "Algorithms are the road to reach the goal. Because it progresses slowly by putting effort into something" (P36); "Algorithms are like mathematics. Because it helps to solve our problems in daily life" (P60); and "Algorithms are like a system that is used in all kinds of problems. Because it contains all the information on the Internet' (P57). These examples underscore the perception of algorithms as structured and solution-oriented systems that are integral to modern problem-solving processes.

The presence of humanization and abstraction themes at significant levels reflects the nuanced and multidimensional perception of algorithms among participants. These themes suggest that students view algorithms not merely as technical tools but also as phenomena intertwined with human qualities, abstract, and even metaphysical dimensions. Examples of these perceptions include statements such as: "Algorithms are like people hiding inside their phones. Because it offers us different preferences by considering the searches we make" (P18); "Algorithms are like fathers. Because they guide and help us in solving many problems" (P25); "Algorithms are like turning towards spiritual life. Because it requires patience, stability and trust, and as a result, it leads to the best" (P4); "Algorithms are like dreams. Because it reveals the things we experience in our subconscious" (P28). These metaphors demonstrate deeper, more personalized engagement with algorithms, reflecting their perceived impact on decision-making and human interactions. In particular, the humanization theme highlights participants' recognition of the role that algorithms play in shaping individual experiences and guiding actions, suggesting an awareness of their presence in everyday life. However, this tendency to humanize algorithms also reveals a potential risk: anthropomorphizing these systems by ascribing human traits and emotional qualities to them. This overloading of meaning may lead to an overestimation of the algorithms' capabilities, masking their limitations as purely computational processes designed and governed by human input.

On the other hand, the abstraction theme demonstrates that participants perceived algorithms as entities capable of engaging with abstract and subconscious realms, emphasizing the complex and often intangible ways in which algorithms are understood. This perception highlights how algorithms are viewed as phenomena that transcend their technical definitions, bridging cognition, culture, and imagination. However, the relatively low proportion of metaphors within the functionalization theme suggests a need for more pedagogical guidance to concretize the practical applications and benefits of algorithms and ensure a balanced understanding of their conceptual and functional dimensions.

Metaphors Created for AI

A total of 32 distinct and meaningful metaphors were identified for AI (Table 2), with the most frequently recurring metaphors being "brain," "robot/machine," and "human."

Table 2. *Overview of Participants' Metaphors for AI*

Metaphors	f	%	Metaphors	f	%	Metaphors	f	%
Brain	11	17,46	Child	2	3,17	School	1	1,59
Robot/ machine	6	9,52	An intelligent teacher	1	1,59	Cyberspace	1	1,59
Human	5	7,94	Intelligence of the future	1	1,59	An infinite road	1	1,59

Metaphors	f	%	Metaphors	f	%	Metaphors	f	%
Assistant	4	6,35	Shopping	1	1,59	Dictionary	1	1,59
System imitating human	3	4,76	Astral dimension	1	1,59	A source of getting used to laziness	1	1,59
Intelligent human	2	3,17	Baby	1	1,59	Beginning of a new era	1	1,59
Robotic human	2	3,17	Computer	1	1,59	Close friend	1	1,59
Library	2	3,17	Deep learning	1	1,59	Google	1	1,59
System	2	3,17	Emotions	1	1,59	Extraordinariness	1	1,59
Nature	2	3,17	Plum	1	1,59	Chocolate	1	1,59
Ready answer	2	3,17	Both good and bad	1	1,59			

The metaphorical perceptions of communication faculty students regarding AI demonstrate a broad diversity, reflecting both pragmatic and conceptual interpretations of the phenomenon. The highest preference for the "brain" metaphor (17.46%) highlights the perception that AI possesses information processing and thinking capacities similar to those of human intelligence. This indicates that students view AI not merely as a tool, but as an entity with complex intellectual capabilities. Meanwhile, the prominence of the metaphors "robot/machine" (9.52%) and "human" (7.94%) underscored the perceptual tension between the mechanical and humanoid dimensions of AI. This suggests that students conceptualize AI as a phenomenon that is both equipped with human-like attributes and characterized by mechanical functionality. Additionally, metaphors such as "assistant" (6.35%), "system imitating human" (4.76%), and "intelligent human" (3.17%), which were expressed less frequently, highlight the perception of AI as a supportive tool or as a system capable of human-like imitation. While these metaphors reflect an understanding of AI as a facilitator of human life, they also suggest acknowledging its inherent limitations.

The preference for metaphors such as "nature," "system," and "library" highlights the emphasis students place on the regular, systematic, and information-oriented functions of AI. Meanwhile, the lower preference for metaphors such as "astral dimension," "an infinite road," and "cyberspace" indicates that, while the perception of AI as an abstract and limitless entity exists, it is relatively less prominent. These findings demonstrate that students approach AI at both the concrete and abstract levels, intertwining its human-like, mechanical, and supportive features within their perceptions. This diversity suggests that AI is perceived as a multidimensional phenomenon, with students associating it with opportunities and limitations. Therefore, these results imply that educational programs on AI should aim to develop both cognitive and critical thinking skills, considering students' multidimensional perceptions of this technology.

Examining the attitudes reflected in the metaphors created for AI (Figure 3), it is evident that positive perceptions significantly dominate. Positive metaphors accounted for 53.13% of the participants, suggesting that the majority of students viewed AI favorably. This indicates a common tendency to perceive AI as a source of information, supportive tools, or intelligent system. Metaphors such as "brain," "intelligent human," and "library" highlight a positive attitude toward AI's human-like cognitive abilities and learning capacity. These perceptions suggest that students perceive AI as an essential

knowledge and educational tool for the future. However, it is important to note that while participants generally maintain an optimistic outlook, they do not entirely disregard the potential negative implications of AI. Rather, their responses reflected a hopeful and forward-looking perspective on technology. Neutral attitudes, comprising 40.63% of the participants, revealed a more critical, analytical, or functional stance toward AI. This significant proportion suggests that many students perceive AI primarily as a system or functional tool, devoid of strong emotional associations, either positive or negative. It may also imply that their engagement with AI has not yet deepened or that they require further education and training to enhance their understanding of technology. Negative attitudes, representing only 6.25% of the participants, indicate that unfavorable perceptions of AI are relatively minimal. This suggests that most students do not view AI as a threatening or harmful phenomenon but rather as a beneficial and practical tool. Negative metaphors, such as "robotic human" and "a source of getting used to laziness," were mentioned only sparingly. These instances reflect minor concerns regarding AI's human-like traits and their potential negative impacts. However, these concerns do not appear to be widespread among faculty communication students. Overall, these findings indicate that students' social perception of AI is predominantly optimistic and positive. At the same time, the limited attention to possible risks, ethical considerations, and broader societal implications of AI underscores the need for more comprehensive discourse and education on these critical issues.

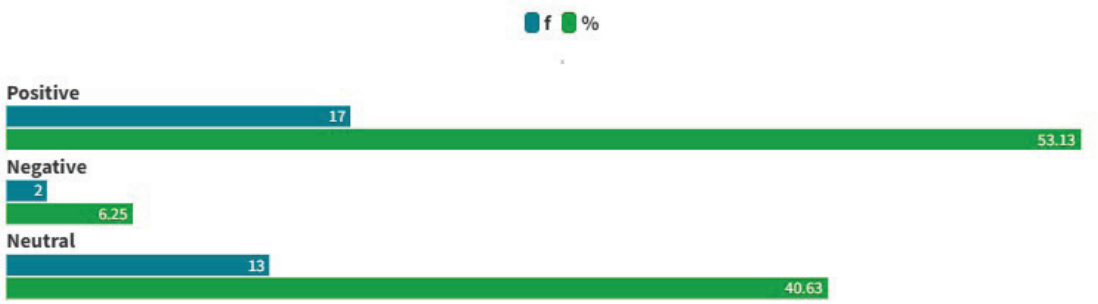

Figure 3. *Attitudes towards Metaphors Created for AI*

When examining the thematic analysis of the metaphors created for AI (Figure 4), it became apparent that a significant proportion of participants (40.63%) associated AI with human characteristics. The theme of humanization highlights the tendency to attribute human-like abilities such as thinking, learning, and decision-making to AI. Metaphors like "an intelligent teacher," "human," and "child" serve as concrete indicators of this perception, associating AI with uniquely human concepts such as intelligence, creativity, and the capacity to learn. This suggests that societal perceptions of AI are shaped by its resemblance to human characteristics and abilities. In essence, AI is not merely perceived as a technological tool but rather as a human-like entity. For example, participants described AI in ways that emphasize its developmental and intellectual capabilities: "Artificial intelligence is like a newborn baby. Because, like a baby, it can only present what it has been taught" (P7); "Artificial intelligence is like a wise person. Because it approaches everything solution-oriented" (P20); and "Artificial intelligence is like a smart teacher. Because it learns from data and produces more accurate results over time" (P49). These examples illustrate the complex and multidimensional perceptions of AI, where its technological nature intersects with human-like attributes, reinforcing its role as a functional and relatable entity within society.

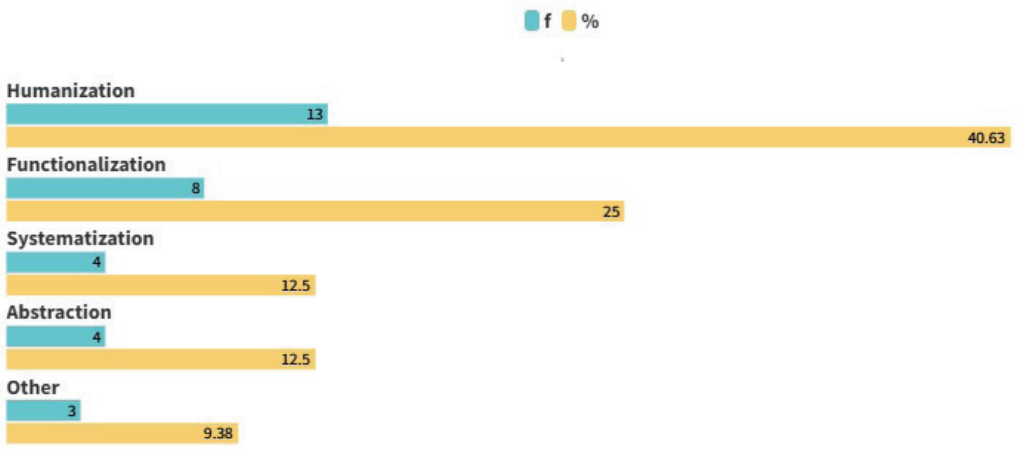

***Figure 4**. Distribution of Metaphors Created for AI According to Themes*

Following the humanization theme, the second most prevalent category was the functionalization theme, comprising 25% of the metaphors. This theme highlights the perception of AI is a practical and utilitarian tool. Participants associate AI with its capacity to solve problems, organize systems, and streamline processes. Metaphors such as "assistant," "library," and "dictionary" emphasize the functional aspects of AI, drawing attention to its role in facilitating daily tasks and enhancing efficiency. This perspective emphasizes that AI is predominantly viewed as a tool that provides convenience in everyday life. For instance, participants expressed their views through statements such as: "Artificial intelligence is like a human assistant. Because it can help with everything" (P51); "Artificial intelligence is like a dictionary in terms of information. Because we can reach many curious things very quickly" (P16); and "Artificial intelligence is like a library with all the books. Because it contains almost all kinds of information" (P11).

The themes of systematization (12.5%) and abstraction (12.5%) indicated that AI is perceived as a mechanism that organizes complex systems and as a representation of abstract and conceptual ideas. The systematization theme highlights the logical and structured nature of AI, whereas the abstraction theme reflects its perception as an enigmatic, deep, and intangible phenomenon. Metaphors such as "robot/machine" and "system" focus on the mechanical and algorithmic aspects of AI, emphasizing its technical and operational functions. In contrast, metaphors such as the "astral dimension," "cyberspace," and "nature" suggest that AI is viewed as a realm of possibilities and imagination, rather than as a tangible reality. The other theme (9.38%) encompasses metaphors that do not fit neatly into established categories and reflect more individualized and context-specific interpretations. Examples such as the "plum," "chocolate," and "source of getting used to laziness" illustrate personal and unique ways of conceptualizing AI. This diversity underscores the multifaceted nature of AI, demonstrating that its meaning varies widely, depending on individual perspectives and experiences.

This distribution reveals that the perception of AI is shaped predominantly by human and functional dimensions, while also encompassing abstract and systematic elements. In other words, thematic analysis of metaphorical perceptions of AI highlights a multidimensional and context-dependent structure. The prominence of the humanization category underscores the emphasis placed on the emotional and cognitive dimensions of technology, whereas the functionalization and systematization categories highlight the importance of its practical and technical aspects. Meanwhile, the abstraction theme

suggests that AI is still perceived as a mystical and not a fully understood phenomenon. Thus, these findings indicate that attitudes toward AI encompass both optimism regarding its potential opportunities and caution regarding its uncertainties and implications.

Conclusion

This study aimed to explore communication faculty students' metaphorical perceptions of AI and algorithms, providing a comprehensive understanding of how these technologies are conceptualized by students. The findings indicate that students generally have positive attitudes toward AI and algorithms. While a very small subset of participants generated metaphors that reflected negative attitudes toward these phenomena, the proportion of neutral metaphors was also noteworthy. These results align with previous findings (Yan vd., 2024). The positive metaphors suggest that participants perceived these technologies as tools for guidance, facilitating access to information, and organizing daily life. Conversely, the less frequently observed negative metaphors revealed some students' concerns about these technologies. In contrast, neutral metaphors indicate that students tend to approach technology from a balanced and more analytical perspective. This distribution of attitudes, as revealed through metaphorical analysis, demonstrates that the participants' perceptions encompass both rational and emotional components, reflecting thoughtful consideration of the social impacts of these technologies.

According to the findings obtained through thematic analysis of the data, metaphors associated with algorithms are predominantly aligned with the theme of systematization, whereas those related to AI emphasize the theme of humanization. Interestingly, metaphors within the humanization theme are frequently observed in the context of algorithms. This suggests that participants tend to ascribe human-like characteristics such as thinking, learning, and decision-making to these technological phenomena. This finding is consistent with prior research in literature. Studies investigating metaphorical perceptions of AI have repeatedly demonstrated that a significant proportion of participants across diverse research groups tend to generate anthropomorphic metaphors (Arslantaş & Ataş, 2024; Erdoğan & Bozkurt, 2023; Saçan vd., 2022). Consequently, the results of this study corroborate existing literature, underscoring the growing tendency toward anthropomorphic perceptions of these technologies. This trend appears to be particularly pronounced as the integration of AI and algorithms into human activities continues to expand.

The metaphors within the systematization theme were more prevalent for algorithms than for AI. This disparity may stem from the fact that students have not encountered concrete applications of algorithms in the same way they have with AI tools (e.g., ChatGPT, Gemini, DeepSeek, Copilot, Canva, Midjourney, etc.). Although AI tools are fundamentally built on algorithms, they provide users with tangible and accessible functionalities. In contrast, algorithms are less experienced as a concept. Users typically engage with algorithms indirectly, primarily through content creation and distribution processes, which allows them to observe how algorithms function within digital ecosystems. For instance, understanding the workings of the YouTube algorithm is crucial for a user to upload a video, as it helps them structure their content and anticipate interaction dynamics following publication. This explains why metaphors related to systematization are less prominent for AI, as users tend to adopt a more functional perspective toward this technology. The predominance of metaphors in the functionalization theme for AI, following the humanization theme, strongly supports this interpretation. On the other hand, metaphors categorized under the abstraction theme were relatively rare

for both algorithms and AI. These metaphors suggest that participants perceived these technologies as unknown, complex, and abstract structures. While this perception may present challenges in understanding the technical and philosophical dimensions of these phenomena, it also indicates that students may not yet fully grasp or thoroughly explore the capabilities and limitations of algorithms and AI.

In conclusion, this study demonstrates that communication faculty students' perceptions of algorithms and AI reflect a multidimensional and context-dependent structure. The findings revealed that students view these technologies not only as tools but also as human-like, functional, and abstract entities. These results suggest that educational programs should consider multidimensional perceptions and aim to enhance both cognitive and critical thinking skills. From this perspective, the necessity of integrating AI and algorithms more comprehensively into communication faculty syllabus has become evident. Additionally, shaping new or existing course content to emphasize both technical and critical literacy is paramount. Furthermore, these results also offer important insights for the media and communication sector, as the metaphors developed by the students for AI and algorithms show that these technologies can play a guiding and transformative role in the sector, not only as technical tools but also in many areas, from content production to audience analysis and algorithmic authority to strategic communication planning. In particular, the prominence of humanization and functionalization themes reveals that AI and algorithms are perceived as "helpers," "decision makers" or "guides" by future media professionals and suggests that this perception has the potential to seriously affect professional practices in the future. However, despite this positive perspective, the tendency toward overconfidence, emotional bonding, or super humanization that emerges through metaphors also harbors risks that may overshadow the ethical and responsible use of AI-based tools in the sector. In particular, considering the non-transparent nature of algorithms, their role in determining the visibility of content, and their potential to manipulate public opinion, the necessity of approaching these technologies with a critical distance becomes even more evident. Therefore, these findings suggest that awareness of technological developments in the field of media and communication, both in terms of vocational education and sectoral practices, should not only be limited to usage skills but also ethical, cultural, and social dimensions should be evaluated.

Future research can contribute to the understanding of the social, cultural, and professional impacts of these technologies by exploring the perceptions of AI and algorithms in greater depth. Comparative studies across disciplines can illuminate the role of educational fields in shaping how these technologies are conceptualized. Longitudinal research can examine how evolving technological developments influence individuals' metaphorical perceptions over time. Moreover, comparative research considering cultural contexts could analyze the perception of AI and algorithms at both universal and local levels. Investigating the perceptions of not only communication students, but also media professionals and journalists could help establish a framework relevant to professional practices. Studies employing both quantitative and qualitative methods could further explore how algorithmic literacy influences attitudes toward technology. Finally, research on the effects of educational programs that address the ethical and social dimensions of AI and algorithms could provide insights into fostering a conscious and critical approach toward these technologies.

References

Abate, Y., & Ado, D. (2024). Metaphorical conceptualization of Happiness and Anger in the Amharic *azmari* Lyrics. *COGENT ARTS & HUMANITIES*, *11*(1), 2425154. https://doi.org/10.1080/23311983.2024.2425154

Akduman, G., & Hatipoğlu, Z. (2021). Kim bu Z kuşağı? *International Journal of Entrepreneurship and Management Inquiries*, *5*(9), Article 9.

Aktan, E., Koçyiğit, M., & Çakmak, V. (2020). Yönetim bilişim sistemleri öğrencilerinin "halkla ilişkiler" kavramına ilişkin metaforik algılarının incelenmesi. *Akdeniz Üniversitesi İletişim Fakültesi Dergisi*, *33*, Article 33. https://doi.org/10.31123/akil.696640

Altuntaş, H., & Karabay, E. (2024). Üniversite öğrencileri ve öğretim üyelerinin yapay zekâya ilişkin metaforik algıları. *Yönetim Bilişim Sistemleri Dergisi*, *10*(2), Article 2.

Arslantaş, H. İ., & Ataş, M. (2024). Lise öğrencilerinin yapay zekâ, robot teknolojisi, metaverse ve uzaktan eğitim ile ilgili metaforik algıları. *Gaziantep Üniversitesi Eğitim Bilimleri Dergisi*, *8*(2), Article 2.

Ayyıldız, T. (2016). Üniversite öğrencilerinin dans kavramına yönelik metaforik algılarının analizi. *Gaziantep Üniversitesi Spor Bilimleri Dergisi*, *1*(2), Article 2.

Bakhtiar, M. (2017). The role of context in the formation of *hejab* "veiling" metaphors in *hejab* billboards and posters in Iran. *METAPHOR AND THE SOCIAL WORLD*, *7*(2), 159-189. https://doi.org/10.1075/msw.7.2.01bak

Bartczak, M., & Bokus, B. (2015). Cognitive Representations (Metaphorical Conceptualizations) of PAST, FUTURE, JOY, SADNESS and HAPPINESS in Depressive and Non-depressive Subjects: Cognitive Distortions in Depression at the Level of Notion. *Journal of Psycholinguistic Research*, *44*(2), 159-185. Scopus. https://doi.org/10.1007/s10936-014-9286-6

Bencsik, A., Horvath-Csikos, G., & Juhasz, T. (2016). Y and Z generations at workplaces. *Journal of Competitiveness*, *8*(3), 90-106. https://doi.org/10.7441/joc.2016.03.06

Benczes, R., & Ságvári, B. (2018). Where metaphors really come from: Social factors as contextual influence in Hungarian teenagers' metaphorical conceptualizations of life. *Cognitive Linguistics*, *29*(1), 121-154. Scopus. https://doi.org/10.1515/cog-2016-0139

Chan, C. K. Y., & Lee, K. K. W. (2023). The AI generation gap: Are Gen Z students more interested in adopting generative AI such as ChatGPT in teaching and learning than their Gen X and millennial generation teachers? *Smart Learning Environments*, *10*(1). Scopus. https://doi.org/10.1186/s40561-023-00269-3

Creswell, J. W. (2013). *Nitel araştırma yöntemleri: Beş yaklaşıma göre nitel araştırma ve araştırma deseni*. Siyasal Kitabevi.

Creswell, J. W. (2017). *Araştırma deseni: Nitel, nicel ve karma yöntem yaklaşımları* (S. B. Demir, Çev.). Eğiten Kitap.

Çoğaltay, N., & Aras, Z. N. (2018). Öğretmen adaylarının öğretmen atamalarında kullanılan sözlü sınava ilişkin algıları: Metefor analizi örneği. *Bitlis Eren Üniversitesi Sosyal Bilimler Dergisi*, *7*(1), Article 1.

Dralega, C. A. (2023). *Digitization, AI and algorithms in African journalism and media contexts: Practice, policy and critical literacies* (s. 201). Scopus.

Drisko, J., Maschi, T., Drisko, J., & Maschi, T. (2015). *Content analysis*. Oxford University Press.

Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J., Eirug, A., Galanos, V., Ilavarasan, P. V., Janssen, M., Jones, P., Kar, A. K., Kizgin, H., Kronemann, B., Lal, B., Lucini, B., … Williams, M. D. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, *57*. Scopus. https://doi.org/10.1016/j.ijinfomgt.2019.08.002

Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., … Wright, R. (2023). "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, *71*. Scopus. https://doi.org/10.1016/j.ijinfomgt.2023.102642

Erdoğan, Ş., & Bozkurt, E. (2023). Fizik öğretmen adaylarının "yapay zekâ" kavramına ilişkin algılarının incelenmesi: Bir metafor çalışması. *Medeniyet ve Toplum Dergisi*, *7*(2), Article 2.

Ganji, M. (2011). The best way to teach phrasal verbs: Translation, sentential contextualization or metaphorical conceptualization? *Theory and Practice in Language Studies*, *1*(11), 1497-1506. Scopus. https://doi.org/10.4304/tpls.1.11.1497-1506

Huh, J., Nelson, M. R., & Russell, C. A. (2023). ChatGPT, AI advertising, and advertising research and education. *Journal of Advertising*, *52*(4), 477-482. Scopus. https://doi.org/10.1080/00913367.2023.2227013

Hülür, H., & Ölçer, H. (2025). Yapay zekâ ve algoritma diktatörlüğü. İçinde H. Hülür & C. Yaşın (Ed.), *Yapay zekâ, toplum ve kültür* (ss. 135-152). Ütopya Yayınevi.

Jarrahi, M. H. (2018). Artificial intelligence and the future of work: Human-AI symbiosis in organizational decision making. *Business Horizons*, *61*(4), 577-586. Scopus. https://doi.org/10.1016/j.bushor.2018.03.007

Jha, A. (2024). AI-Driven algorithms for optimizing social media advertising: Prospects and challenges. İçinde *Cases on Social Media and Entrepreneurship* (ss. 63-84). Scopus. https://doi.org/10.4018/979-8-3693-1781-5.ch004

Karabulut, B. (2015). Bilgi toplumu çağında dijital yerliler, göçmenler ve melezler. *Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *21*, Article 21.

Koebe, P. (2025). How digital technologies and AI contribute to achieving the health-related SDGs. *International Journal of Information Management Data Insights*, *5*(1). Scopus. https://doi.org/10.1016/j.jjimei.2024.100298

Kreps, S., McCain, R. M., & Brundage, M. (2022). All the news that's fit to fabricate: AI-generated text as a tool of media misinformation. *Journal of Experimental Political Science*, *9*(1), 104-117. Scopus. https://doi.org/10.1017/XPS.2020.37

Krippendorff, K. (2019). *Content analysis: An introduction to its methodology*. SAGE Publications, Inc. https://doi.org/10.4135/9781071878781

Lakoff, G., & Johnson, M. (2003). *Metaphors we live by* (W. a new Afterword, Ed.). University of Chicago Press. https://press.uchicago.edu/ucp/books/book/chicago/M/bo3637992.html

Leung, J. S. C., Chan, K. K. H., & He, T. C. (2021). Student teachers' metaphorical conceptualisations of the experience of watching themselves and their peers on video. *Educational Studies*, *47*(3), 257-274. Scopus. https://doi.org/10.1080/03055698.2019.1691505

Makridakis, S. (2017). The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms. *Futures*, *90*, 46-60. Scopus. https://doi.org/10.1016/j.futures.2017.03.006

Merriam, S. B. (2018). *Nitel araştırma: Desen ve uygulama için bir rehber* (S. Turan, Çev.). Nobel Akademik Yayıncılık.

Neuman, W. L. (2020). *Toplumsal araştırma yöntemleri -Nicel ve nitel yaklaşımlar-* (8. bs, C. 2). Siyasal Kitabevi.

Nguyen, D. (2023). How news media frame data risks in their coverage of big data and AI. *Internet Policy Review*, *12*(2). Scopus. https://doi.org/10.14763/2023.2.1708

Ouchchy, L., Coin, A., & Dubljević, V. (2020). AI in the headlines: The portrayal of the ethical issues of artificial intelligence in the media. *AI and Society*, *35*(4), 927-936. Scopus. https://doi.org/10.1007/s00146-020-00965-5

Porlezza, C. (2023). Promoting responsible AI: A European perspective on the governance of artificial intelligence in media and journalism. *Communications*, *48*(3), 370-394. Scopus. https://doi.org/10.1515/commun-2022-0091

Prensky, M. (2001a). Digital natives, digital immigrants part 1. *On the Horizon*, *9*(5), 1-6. https://doi.org/10.1108/10748120110424816

Prensky, M. (2001b). Digital natives, digital immigrants part 2: Do they really think differently? *On the Horizon*, *9*(6), 1-6. https://doi.org/10.1108/10748120110424843

Reali, F., & Arciniegas, C. (2015). Metaphorical conceptualization of emotion in Spanish: Two studies on the role of framing. *Metaphor and the Social World*, *5*(1), 20-41. Scopus. https://doi.org/10.1075/msw.5.1.02rea

Reiss, M. V., Festic, N., Latzer, M., & Rüedy, T. (2021). The relevance ınternet users assign to algorithmic-selection applications in everyday life. *Studies in Communication Sciences*, *21*(1), 71-90. Scopus. https://doi.org/10.24434/J.SCOMS.2021.01.005

Roe, J., & Perkins, M. (2023). 'What they're not telling you about ChatGPT': Exploring the discourse of AI in UK news media headlines. *Humanities and Social Sciences Communications*, *10*(1). Scopus. https://doi.org/10.1057/s41599-023-02282-w

Roy, B., Ghosh, S., Roy, P., Sarkar, S. K., & Choudhury, N. R. (2025). Digital technologies in education: AI, robotics, and generational challenges or opportunities. İçinde *Impacts of Digital Technologies Across Generations* (ss. 41-64). Scopus. https://doi.org/10.4018/979-8-3693-6366-9.ch003

Saban, A. (2010). Prospective teachers' metaphorical conceptualizations of learner. *Teaching and Teacher Education*, *26*(2), 290-305. Scopus. https://doi.org/10.1016/j.tate.2009.03.017

Saçan, S., Yaralı, K. T., & Kavruk, S. Z. (2022). Çocukların "yapay zeka" kavramına ilişkin metaforik algılarının incelenmesi. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi*, *64*, Article 64. https://doi.org/10.21764/maeuefd.1074024

Schröder, U. A. (2009). Preferential metaphorical conceptualizations in everyday discourse about love in the Brazilian and German speech communities. *Metaphor and Symbol*, *24*(2), 105-120. Scopus. https://doi.org/10.1080/10926480902830862

Sözer, Y. (2021). "Ztudents" on X and Y Lenses in Turkey: Views of X and Y Generation Teachers about Certain Class Properties of Gen Z High-School Students. *Shanlax International Journal of Education*, *10*(1), 26-44.

Sudmann, A., & Schröter, J. (2023). Media and the transformative potential of AI in the scientific field: Theses on the media conditions of knowledge production in the era of learning algorithms. İçinde *Beyond Quantity: Research with Subsymbolic AI* (ss. 235-254). Scopus.

Szymkowiak, A., Melović, B., Dabić, M., Jeganathan, K., & Kundi, G. S. (2021). Information technology and Gen Z: The role of teachers, the internet, and technology in the education of young people. *Technology in Society*, *65*. Scopus. https://doi.org/10.1016/j.techsoc.2021.101565

Twenge, J. M. (2018). *i-Nesli: Bugünün "süper bağlantılı gençleri" neden bu kadar duyarsız, hoşgörülü ama daha mutsuz ve erişkin olmaya hiç hazır değil?* (O. Gündüz, Çev.). Kaknüs Yayınları.

Uçkun, C., & Konak, O. (2023). Meslek yüksekokulu öğrencilerinin yapay zekâ kavramına ilişkin metaforik algıları. *TuranSAM*, *15*(60). https://avesis.kocaeli.edu.tr/yayin/f65ab401-0931-4f76-b454-6348d89905a7/meslek-yuksekokulu-ogrencilerinin-yapay-zeka-kavramina-iliskin-metaforik-algilari

Uslu, B. (2019). Preschool teachers'/principals' feelings matter: Their metaphoric perceptions on academicians. *European Early Childhood Education Research Journal*, *27*(5), 722-735. https://doi.org/10.1080/1350293X.2019.1651973

Valenzuela, S. (2024). When algorithms are editors: How social media, AI, and misinformation alter news consumption. *Comunicacion y Medios*, *33*(49), 186-191. Scopus. https://doi.org/10.5354/0719-1529.2024.74976

Xu, W., & Tan, X. (2024). Beyond words: L2 writing teachers' visual conceptualizations of ChatGPT in teaching and learning. *JOURNAL OF SECOND LANGUAGE WRITING*, *64*, 101110. https://doi.org/10.1016/j.jslw.2024.101110

Yan, Y., Sun, W., & Zhao, X. (2024). Metaphorical conceptualizations of generative artificial intelligence use by Chinese university EFL learners. *Frontiers in Education*, *9*. Scopus. https://doi.org/10.3389/feduc.2024.1430494

Communication Faculty Students' Metaphorical Perceptions of Algorithms and Artificial Intelligence (AI)

Yunus ERGEN (Asst. Prof. Dr.)

Extended Abstract

The proliferation and influence of artificial intelligence (AI) systems and their constituent algorithms have emerged as significant subjects of scholarly discourse in contemporary academic literature. The heightened academic attention paid to these technological phenomena can be attributed to multiple factors. Primarily, AI and algorithmic systems not only serve as fundamental catalysts for technological advancement and innovation in the modern era but also function as decisive determinants in shaping sociocultural paradigms and mediating communicative practices within societies. This intrinsic relationship between AI technologies and societal transformation amplifies the scholarly interest in these phenomena. In the context of accelerated digitalization, the pervasive integration of these technologies into various facets of quotidian existence further elevates their empirical significance.

The implementation and impact of AI and algorithmic systems extend beyond individual utilization, manifesting significantly in the operational frameworks of media and communication industries. These technological systems demonstrate efficacy across a comprehensive spectrum of applications, encompassing the automation of news production protocols, content personalization mechanisms, audience analytics, and modification of social media interaction paradigms. Furthermore, these technologies occupy pivotal positions in the formulation of digital marketing methodologies and cultivation and management of public discourse, thereby facilitating a fundamental transformation in contemporary communication paradigms. Consequently, AI and algorithmic systems have evolved into essential components that fundamentally reconfigure the communication and media practices that are characteristic of modern society.

Moreover, these technological advancements not only improve operational efficiency, but also fundamentally alter patterns of media consumption and communication, driving a paradigm shift in the strategic decision-making processes and operational methodologies of industry stakeholders. This extensive transformation necessitates a deep understanding of the dynamic forces that influence the trajectory of the media and communication sectors' development. For students pursuing academic qualifications in communication studies, institutions focused on fostering both professional expertise and intellectual proficiency for industry practitioners, and acquiring a comprehensive understanding of these technologies and their underlying operational paradigms is of paramount importance. Such an understanding is essential not only for the development of professional competencies but also for cultivating critical analytical frameworks necessary to assess the sociological ramifications of these technological systems. As emerging communication professionals, these students are tasked with conceptualizing technology not merely as a functional tool, but as a transformative force that reshapes human interactions and societal structures. Exploring students' metaphorical conceptualizations of AI and algorithmic systems offers valuable insights into their comprehension of both the opportunities and challenges presented by these technologies.

From this perspective, this study seeks to systematically analyze and thoroughly explain the metaphorical perceptions and conceptual frameworks through which communication students interpret and understand AI and algorithmic systems.

The study employed phenomenological research design within a qualitative methodological framework to investigate the metaphorical conceptualizations of algorithms and AI. Data collection was facilitated through the administration of a structured "algorithms and artificial intelligence metaphor form" to a purposive sample of 63 communication faculty students. This methodological approach was selected because of its capacity to elucidate the depth and nuanced complexity inherent in students' conceptual frameworks and perceptual schemas regarding these technological phenomena. The analytical framework utilized a content analysis methodology to systematically examine and decode the collected data, enabling a rigorous investigation of the semantic structures underlying metaphorical expressions.

The findings yielded a diverse corpus of metaphorical conceptualizations, encompassing 33 distinct metaphorical constructs for algorithms and 32 for AI. An analysis of these metaphorical representations revealed predominantly positive attitudinal orientations toward both phenomena, suggesting an optimistic epistemological framework regarding the role of these technologies within the communication domain. The semantic content analysis of the metaphorical construction was systematically categorized and examined through five distinct thematic dimensions: "systematization," "humanization," "functionalization," "abstraction," and "other." This taxonomic framework facilitates a structured analytical approach for comprehending multidimensional cognitive schemas through which students conceptualize and interpret these technological phenomena. The categorization process employed rigorous coding protocols to ensure analytical precision and theoretical consistency in the classification of metaphorical expressions.

An important finding emerged regarding the differing perceptions of algorithms and AI. While algorithms are predominantly conceptualized within systematic and structural frameworks, AI often invokes anthropomorphic connotations, with students frequently attributing human-like characteristics and capabilities to AI systems. This distinction in metaphorical representation reflects a nuanced understanding of the distinct roles and attributes of these technologies. These findings offer valuable insights into how future communication professionals conceptualize and interpret technological tools that will be integral to their professional practices. The predominance of positive attitudes suggests openness to the integration of technology within communication practices, while the diversity of metaphorical expressions points to a multifaceted understanding of the potential applications and impacts of these technologies.

The results of this study have significant implications for both communication and professional development. An understanding of students' perceptions can inform curriculum design and pedagogical strategies within communication faculties, ensuring that educational programs effectively address both the technical and conceptual dimensions of these technologies. Additionally, these insights can inform the creation of educational initiatives that prepare students for an increasingly technology-driven communication environment while also encouraging a critical and reflective examination of the role of these technologies in society. In conclusion, this research provides a comprehensive understanding of how communication students conceptualize algorithms and AI through metaphorical perceptions. The findings underscore the importance of

integrating technological literacy with critical thinking skills in communication education, enabling future professionals to effectively utilize these technologies while being mindful of their broader societal implications.

Keywords: Algorithms, Artificial Intelligence (AI), Metaphor Analysis, Metaphorical Perception, Faculty of Communication.

Bu makale **intihal tespit yazılımlarıyla** taranmıştır. İntihal tespit edilmemiştir.

This article has been scanned by **plagiarism detection softwares.** No plagiarism detected.

Bu çalışmada **"Yükseköğretim Kurumları Bilimsel Araştırma ve Yayın Etiği Yönergesi"** kapsamında uyulması belirtilen kurallara uyulmuştur.

In this study, the rules stated in the **"Higher Education Institutions Scientific Research and Publication Ethics Directive"** were followed.

Araştırma tek bir yazar tarafından yürütülmüştür.

The research was conducted by a single author.

Çalışma kapsamında herhangi bir kurum veya kişi ile **çıkar çatışması** bulunmamaktadır.

There is no **conflict of interest** with any institution or person within the scope of the study.

Etik Kurul İzni | Ethics Committee Permission

Within the framework of the decision taken during the meeting by Hatay Mustafa Kemal University Social and Human Sciences Scientific Research and Publication Ethics Committee dated 07.11.2024 and numbered 25; the study does not contain any ethical issues.

Hatay Mustafa Kemal Üniversitesi Sosyal ve Beşeri Bilimler Bilimsel Araştirma ve Yayın Etiği Kurulu'nun 07.11.2024 tarihli toplantısında alınan 25 sayılı karar çerçevesinde çalışma etik açıdan bir sakınca içermemektedir.