Yönetim Bilimleri Dergisi/Journal of Administrative Sciences
Cilt/Volume: 24, Sayı/No: 60, ss./pp.: 556-575
DOI: https://doi.org/10.35408/comuybd.1772137

-RESEARCH ARTICLE-

ALGORITHMIC DOMINATION AND THE VISIBILITY OF EDUCATIONAL CONTENT: A CRITICAL STUDY OF YOUTUBE

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Abstract

This study investigates how educational content on YouTube gains visibility or becomes invisible through algorithmic processes. Grounded in critical theory, the research employs the concepts of surveillance capitalism, digital labor, and critical algorithm studies to frame the analysis. Using search queries related to high-stakes national exams in Turkey (LGS, TYT, AYT, YKS, and KPSS), YouTube search results were collected and examined through qualitative observation and content analysis. The findings reveal that the visibility of educational content is shaped less by pedagogical value and more by strategic headline practices (such as high achievement promises, year-specific labels, tactical/strategic claims, and exaggerated expressions) and popularity metrics. The algorithmic filtering mechanisms place educational content in a disadvantaged position, compelling content creators to constantly invest digital labor. This dynamic aligns with Zuboff's notion of surveillance capitalism, where user data and content production are commodified within digital platforms. The results indicate that algorithmic structures restrict not only individual learning opportunities but also broader issues of public benefit and educational equity. Consequently, there is an urgent need for more transparent, accountable, and pedagogy-oriented digital media models.

Keywords: *Surveillance capitalism, Digital labor, YouTube, Educational content, Algorithm.*

JEL Codes: *L86, D83, J24, Z13.*

Başvuru: *25.08.2025* **Kabul:** *05.02.2026*

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YOUTUBE VE ALGORİTMİK TAHAKKÜM: EĞİTİM İÇERİKLERİNİN GÖRÜNÜRLÜĞÜ ÜZERİNE ELEŞTİREL BİR ANALİZ[3]

Öz

Bu çalışma, YouTube platformunda yer alan eğitim içeriklerinin algoritmalar aracılığıyla nasıl görünürlük kazandığını ve hangi koşullarda görünmezleştiğini incelemektedir. Eleştirel kuram perspektifinden hareketle gözetim kapitalizmi, dijital emek ve eleştirel algoritma çalışmaları kuramsal çerçeveyi oluşturmaktadır. Çalışmada, Türkiye'de milyonlarca öğrenciyi doğrudan ilgilendiren LGS, TYT, AYT, YKS ve KPSS sınavlarına ilişkin anahtar kelimeler kullanılarak YouTube'da aramalar yapılmış; elde edilen veriler içerik analizi ve gözlem yöntemleriyle değerlendirilmiştir. Bulgular, eğitim içeriklerinin görünürlüğünün pedagojik değerlerinden çok, dikkat çekici başlık stratejileri (yüksek başarı vaatleri, güncel yıl vurguları, taktik/strateji söylemleri ve abartılı ifadeler) ve popülerlik ölçütleriyle belirlendiğini göstermektedir. Eğitim içeriklerinin algoritmik sıralamalarda geri planda kalması, üreticileri sürekli dijital emek harcamaya zorlamakta; bu durum Zuboff'un gözetim kapitalizmi yaklaşımıyla uyumlu biçimde, kullanıcı verilerinin ve içerik üretiminin ticarileşmesini beraberinde getirmektedir. Araştırma sonuçları, eğitim içeriklerinin yalnızca bireysel öğrenme süreçleri açısından değil, aynı zamanda kamusal fayda ve fırsat eşitliği bağlamında da algoritmik yapılar tarafından sınırlandığını ortaya koymaktadır. Bu nedenle, daha şeffaf, hesap verebilir ve pedagojik niteliği önceleyen dijital medya modellerine ihtiyaç duyulmaktadır.

Anahtar Kelimeler: *Gözetim kapitalizmi, Dijital emek, YouTube, Eğitim İçeriği, Algoritma.*

JEL Kodları: *L86, D83, J24, Z13.*

"Bu çalışma Araştırma ve Yayın Etiğine uygun olarak hazırlanmıştır."

[3] Genişletilmiş Türkçe Özet, çalışmanın sonunda yer almaktadır.

1. INTRODUCTION

Communication has been one of the most fundamental and defining elements of human history from prehistoric times to the present. Beyond facilitating interaction between individuals, it has also formed the foundation of cultural transmission, social organization, and scientific progress. In this developmental process, the invention of writing constitutes a significant turning point. Writing made possible the use and codification of numbers, and these codes later paved the way for their transformation into the basic data formats of digital systems. Therefore, writing should be regarded not merely as a medium of information transmission, but also as the first systematic symbolic structure that laid the groundwork for the digital age.

With digitalization, communication processes have transformed not only interpersonal interactions but also the ways of learning, thinking, and consuming. Göktürk (2023) states that digitalization creates multidimensional effects on individual free will and lifestyle. Today, digital devices such as mobile phones, tablets, and smart televisions have become not only tools for entertainment or communication but also fundamental instruments for acquiring knowledge and engaging in learning processes. According to Selwyn (2014), the internet has now attained a vital importance comparable to that of water and air.

In this transformation, video-based content providers have assumed a special role. Founded in 2005 and acquired by Google in 2006, YouTube has become one of the key actors of digital culture. Jones (2008) emphasizes that YouTube offers its users many interactive features such as uploading, watching, sharing, and commenting on videos. Initially entertainment-oriented, the platform has gradually evolved into an active medium in educational processes, creating a vast repository of educational content such as lesson reviews, exam preparation, and subject explanations, particularly for young individuals and students. According to Ata and Atik (2016), learning activities carried out through mobile devices enable individuals to access information independently of time and place, thereby strengthening equal opportunities in education.

From the perspective of students, YouTube has become an important resource particularly in exam preparation processes for peer support and informal learning practices. Tok (2022) states that students prepare for exams by using videos produced by their peers, and that these videos provide positive contributions to their learning processes. Similarly, Yunus and Kaleci (2018) emphasize that concepts such as lifelong learning and in-service training have become more accessible through digital platforms. In the Turkish context, YouTube carries a potential to reduce inequalities for socioeconomically disadvantaged individuals, in line with the principle of the right to education stated in Article 42 of the Constitution (İnan and Demir, 2018).

However, despite these positive features, the visibility of educational content largely depends on the functioning of algorithms. The content ranking logic of platforms such as YouTube is oriented toward highlighting videos that are likely to capture users'

attention. For this reason, content with high educational value often remains in the background, while videos with striking and clickable titles become more visible. This situation is directly related to the lack of transparency in algorithmic decision-making, algorithmic filtering, and recommendation systems, which are increasingly debated in the literature. Therefore, discussing YouTube's role in education should not only focus on the platform's ability to promote equal opportunities, but also on how it produces a sphere of "invisibility" through algorithmic structures.

The aim of this study is to examine the visibility of educational content on YouTube within the context of algorithmic decision-making mechanisms and to discuss the boundaries of this visibility from the perspective of critical theory. In this way, the study seeks to provide an original contribution to the increasingly significant topic of "the social impacts of algorithms" in both communication studies and the field of education.

2. RESEARCH METHOD, LIMITATIONS, AND SAMPLE

This study aims to examine the visibility levels of educational content on the YouTube platform within the context of algorithmic structures. The research is structured within the framework of a qualitative research method, employing both content analysis and observation techniques.

2.1. Research Aim and Design

The primary aim of this study is to examine how educational content on YouTube becomes visible or invisible as a result of algorithmic decision-making processes. In line with this aim, the study adopts the concepts of digital labor and surveillance capitalism as its theoretical foundation, drawing on the perspective of critical theory.

2.2. Sample Selection

The sample was determined based on exam-oriented educational content widely used in Turkey. In particular, exams such as LGS, TYT, AYT, YKS, and KPSS are at the center of critical educational processes that concern millions of students. For this reason, searches related to these exams provide a suitable context for observing the criteria by which algorithms rank educational content and grant it visibility.

2.3. Keyword Selection

The keywords were determined by considering critical subjects and topics in exam preparation:

- "TYT Turkish Paragraph" → the most important topic determining success in Turkish tests.
- "LGS Mathematics" → the most searched subject in secondary education transition.
- "AYT History Summary" and "TYT-AYT Practice Test Solutions" → exam review content for high school students.

- "KPSS Preparation" → the most frequently used educational content in the public personnel selection process.

These keywords were strategically selected to test the visibility criteria of algorithms.

2.4. Data Collection Process

The data collection procedures were carried out using an anonymous (incognito) browser mode. In this way, YouTube's personalized recommendations based on user history were excluded, allowing for more impartial results. The searches were repeated on specific days in May 2025. This time frame corresponds to the exam period, representing the phase in which educational content is most frequently shared and viewed.

2.5. Units of Analysis and Coding Strategy

In the obtained search results, videos were classified according to their position within the list. The units of analysis were defined as follows:

- **Video title** (degree of attractiveness, exaggeration, or promise-oriented expressions)
- **Channel type** (institutional educational channel, individual creator, news/media channel, etc.)
- **Video length** (short explanation, medium length, long format)
- **View count** (low, medium, high engagement)
- **Title structure characteristics** (e.g., *"success in a single video," "high score guarantee,"* emphasis on "strategy," etc.)

During the coding process, these categories were pre-defined, and each video was classified according to the relevant criteria.

2.6. Validity and Reliability

The coding process was carried out by a single researcher, which constitutes one of the limitations of the study. To ensure coding consistency, the same videos were re-coded at different times, and the results were checked for consistency. For future studies, it is recommended to include a second coder in order to measure inter-coder reliability.

2.7. Note on Algorithmic Terminology

The content analyzed in this research was obtained based on YouTube's search algorithm. Therefore, the listed videos are not personalized content generated by the platform's recommendation system, but rather ranking results that emerged from searches conducted with specific keywords. This distinction is important to ensure conceptual clarity in the study.

3. THEORETICAL FRAMEWORK

Critical theory provides a profound point of reference for analyzing the functioning of digital platforms. Founded in Frankfurt in 1923, the Institute for Social Research focused on explaining the inequalities of modern society through media, the culture industry, and ideological apparatuses. Thinkers such as Horkheimer, Adorno, and Marcuse argued that media systems are intertwined with economic interests and that cultural production cannot be considered independently of processes of commercialization (Özek, 2019: 1539). This approach remains significant for understanding today's digital media environments; for algorithms, much like classical mass communication tools, function as filtering mechanisms guided by particular interests.

Christian Fuchs, a contemporary follower of the Frankfurt School, has updated this legacy through the concept of digital labor developed in the context of social media. According to Fuchs, users are not only consumers but also producers; behaviors such as viewing, clicking, and commenting are transformed into economic value and serve capital accumulation (Fuchs, 2020: 22). In this context, content creators on YouTube are compelled to adapt to the expectations of algorithms in order to gain visibility, which in turn reveals an invisible labor process (Romele & Severo, 2016).

Shoshana Zuboff's theory of surveillance capitalism also provides an important framework for explaining the function of algorithms. According to Zuboff, platforms continuously monitor user behavior, transform it into data, and utilize this data for commercial interests (Aşkın, 2022). Algorithms not only predict user preferences but also shape them (Talay, 2022). This approach constitutes a critical theoretical tool for understanding why educational content on YouTube becomes invisible.

Alongside these classical approaches, critical algorithm studies that have emerged over the past decade have examined the social consequences of algorithms in greater detail. Within this literature, the following themes stand out:

- Algorithmic recommendation systems: Systems that provide content based on users' past behaviors create significant inequalities in access to information. Educational content is often relegated to the background within popularity-based criteria, thereby suffering a loss of visibility.
- Algorithmic filtering: Search and ranking mechanisms rely on non-transparent criteria in determining which content will be prioritized. This process restricts users' ability to access diverse sources of information.
- Algorithmic bias: Algorithms are not neutral mechanisms; they are driven by commercial interests, the advertising economy, and data-based prejudices (Şener & Kuş, 2015). This leads to the reduced visibility of educational content with high pedagogical value.

- Algorithmic domination: While the illusion of free choice is preserved for users, in reality, content is presented within the parameters determined by the platform. This structure systematically directs and shapes user behavior.

Jean Baudrillard's theory of simulacra is useful for understanding the way algorithms reproduce reality. Baudrillard (1991) emphasizes that individuals are no longer confronted with reality itself, but with its simulations. On platforms such as YouTube, educational content exists within a commodified order of simulation created by algorithms; the content users encounter is less a product of pedagogical quality than of a clickability-oriented construct.

In this context, the findings of the study can also be interpreted through Baudrillard's concept of simulation. Expressions frequently observed in video titles such as "certain exam topics," "+20 points guarantee," or "all strategies in a single video" do not represent pedagogical reality itself but rather construct a simulation of success designed to be algorithmically clickable. These titles function as symbolic promises that simulate educational certainty, while masking the uncertainty and complexity inherent in learning processes. Thus, educational content on YouTube is not merely simplified, but transformed into a hyperreal representation of learning, where visibility is achieved through the simulation of guaranteed achievement rather than through pedagogical substance. In this sense, algorithmic visibility operates by privileging simulated educational realities that are optimized for attention and engagement, reinforcing a clickability-oriented logic rather than an educational one (Baudrillard, 1991).

John Fiske (1999) defines media consumption as a form of labor. YouTube users continuously generate economic value through the videos they watch and the interactions they engage in. In the context of educational content, this is significant for understanding how the labor invested by producers to gain visibility, as well as the consumption-based production practices of users, become commodified.

In conclusion, the theoretical framework of this study is constructed by integrating classical critical approaches with the contemporary literature on algorithm studies. In this way, the invisibility of educational content on YouTube will be addressed within the contexts of digital labor and surveillance capitalism, as well as algorithmic recommendation, filtering, bias, and domination. This theoretical integration clarifies the study's original position in the literature and provides a critical basis for discussing the role of algorithms in education.

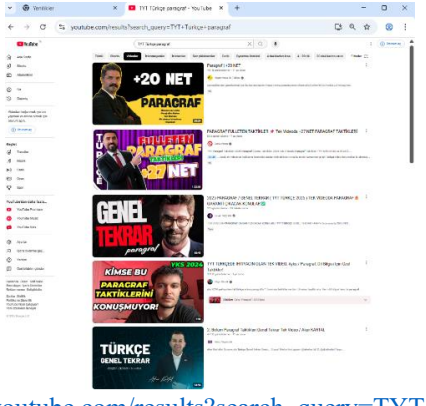
4. FINDINGS

The data obtained from YouTube searches were analyzed across categories such as video titles, channel types, durations, and view counts. The findings indicate that the visibility of educational content is directly related not only to its pedagogical value but also to its algorithmic compatibility. In particular, the language used in titles has emerged as a decisive factor for visibility. During the coding process, titles were

classified according to criteria such as: “promise of high achievement” (+20 points, everyone will score 90), “emphasis on the current year” (2025 TYT, 2026 KPSS), “strategy/tactics emphasis” (5 rules, paragraph strategies), “exaggerated/attention-grabbing expressions” (mega practice test, all topics in one video), and “comprehensive review claim” (full review, single video). This classification reveals that videos rely heavily on linguistic and visual strategies to gain visibility.

In the example of the search for “TYT Turkish Paragraph,” it was observed that the vast majority of the suggested videos were presented with attention-grabbing titles. Among the titles, expressions such as “+20 points” or “all strategies in a single video” stood out, and it was found that such strategies were also supported by high view counts.

Figure 1. Algorithmic Ranking of Suggested Videos in the Search Result for “TYT Turkish Paragraph”



Source: https://www.youtube.com/results?search_query=TYT+Türkçe+Paragraf

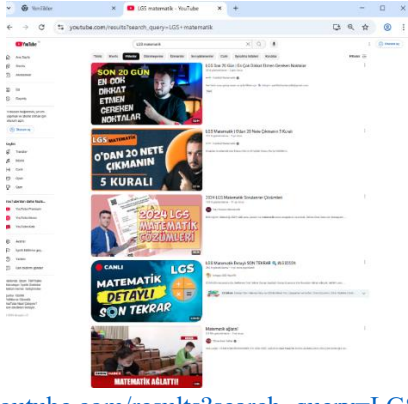
Table 1. Title Structures, Channel Types, and View Data of Suggested Videos Based on the Search for “TYT Turkish Paragraph”

Video Title	Channel Type	Video Duration (minutes)	View Count	Title Structure Feature
Paragraph! +20 NET	Education	29	431K	Claim of net score, emphasis on high achievement
PARAGRAPH FULL STRATEGIES +27 NET PARAGRAPH TACTICS	Education	82	80K	Focused on tactics, short and direct explanation
2025 PARAGRAPH / GENERAL REVIEW (TYT TURKISH 2025) GUARANTEED QUESTIONS IN A SINGLE VIDEO	Education	56	215	Emphasis on current year, comprehensive review

THE ONLY VIDEO YOU NEED IN TYT TURKISH	Personal Vlog	7	331K	Claim of being the one and only video
Part 2 Paragraph Tactics General Review Single Video / Aker KARTAL	Education	54	477K	Aiming for prestige through clarity and personal name reference

A similar pattern has also emerged in the search for "LGS Mathematics." In these searches, expressions such as "5 rules to rise from 0 to 20 points" or "Final review" promised users quick and certain success. At the same time, titles dramatizing the mathematics course, such as "Mathematics Made Me Cry!" were observed to have reached millions of views. This demonstrates that even in educational content, exaggerated or emotional language provides an advantage in terms of algorithmic visibility.

Figure 2. Distribution of Prominent Video Content Based on Title, Channel Type, and View Criteria in the Search for "LGS Mathematics"



Source: https://www.youtube.com/results?search_query=LGS+Matematik

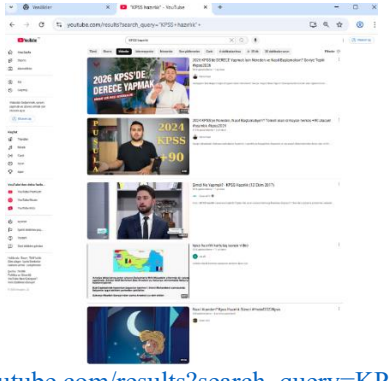
Table 2. Title Structures, Channel Types, and View Data of Suggested Videos Based on the Search for "TYT Turkish Paragraph"

Video Title	Channel Type	Video Duration (minutes)	View Count	Title Structure Feature
LGS Last 20 Days | The Most Important Points to Pay Attention To	Education	15	33K	The word "most" is used in an attention-grabbing way.
LGS Mathematics | 5 Rules to Rise from 0 to 20 Points	Education	13	102K	Tips are intended to be given under the title of rules.
2024 | Solutions of LGS Mathematics Questions	Education	38	128K	Draws attention to previously asked questions.

LGS Mathematics Detailed FINAL REVIEW #LGS 2024	Education	286	260K	The word "FINAL" is used to emphasize that this topic will not be addressed again.
Mathematics Made Me Cry!	News Channel	2	2.4M	A clickbait-style title.

Similar strategies are also evident in the searches for "KPSS Preparation." Expressions such as "Everyone will score above 90" or "Ways to achieve top ranking" stand out as claims that directly address the expectations of the target audience. While some videos were based on individual explanations, it was also observed that television channel content gained visibility. This diversity demonstrates that different types of producers attempt to stand out in algorithmic ranking by employing similar title strategies.

Figure 3. Algorithmic Ranking of Suggested Videos in the Search for "KPSS Preparation"



Source: https://www.youtube.com/results?search_query=KPSS+hazırlık

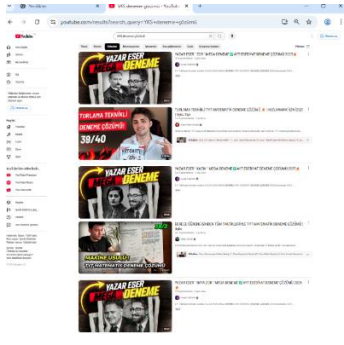
Table 3. Classification of Prominent Video Content Based on Title Structure, Channel Type, and Engagement Data in the Search for "KPSS Preparation"

Video Title	Channel Type	Video Duration (minutes)	View Count	Title Structure Feature
How to Start and From Where to Connect for Top Ranking in KPSS 2026? Placement Test #kpss2026	Education	15	29K	Draws attention to the future and the word "top ranking".
Where and How Should I Start for KPSS 2024? Everyone Will Score Above 90! #teambk #kpss2024	Education	9	119K	The word "everyone" is used as a bold claim.
What Should Be Done Now? – KPSS Preparation (October 12, 2017)	Television Channel	85	64K	A clear statement focusing on what candidates should do.
KPSS Preparation: War of Independence Video	Individual	9	13K	A topic-focused title.

How Was I Appointed? My KPSS Preparation Journey #Target2022Kpss	Individual	22	238	A personal journey is narrated.

In the searches for TYT and AYT practice test solutions, titles such as “mega practice test,” “all strategies,” and “challenging test” stood out. It was observed that individual content creators, similar to institutional channels, found a place in algorithmic ranking through the use of attention-grabbing titles and hashtags. It is particularly noteworthy that individual creators demonstrated high performance in terms of view counts.

Figure 4. Algorithmic Ranking of Videos Themed “TYT and AYT Practice Test Solutions”



Source:
https://www.youtube.com/results?search_query=TYT+ve+AYT+Deneme+Çözümü

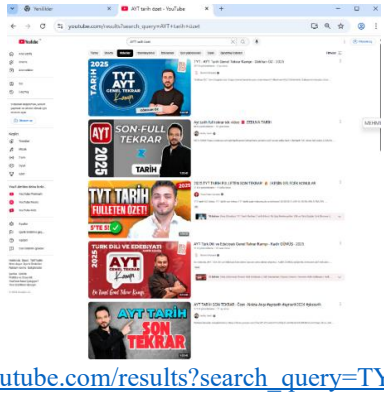
Table 4. Distribution of Prominent Videos in TYT and AYT Practice Test Solution Searches Based on Title Strategies, Channel Types, and Viewing Performance

Video Title	Channel Type	Video Duration (minutes)	View Count	Title Structure Feature
AUTHOR WORK "DIFFICULT" MEGA PRACTICE TEST AYT LITERATURE TEST SOLUTION 2025	Education	29	10K	Practice test difficulties categorized.
TOURING TECHNIQUES TYT MATHEMATICS PRACTICE TEST SOLUTION	Education	70	210K	A specific technique is mentioned and its purpose indicated.
AUTHOR WORK "PITY" MEGA PRACTICE TEST AYT LITERATURE TEST SOLUTION	Education	29	9.6K	Practice test difficulties categorized.
FROM A TOP STUDENT: TYT MATHEMATICS PRACTICE TEST SOLUTION WITH ALL STRATEGIES! #yks	Individual	81	547K	Personal reference provided and hashtag used.
AUTHOR WORK "VERY DIFFICULT" MEGA PRACTICE TEST AYT LITERATURE TEST SOLUTION 2025	Education	32	15K	Practice test difficulties categorized.

A descriptive comparison of the videos listed in Table 4 indicates that title strategies based on high promises, personal references, and comprehensive strategy claims are associated with significantly higher viewing performance. For instance, the video titled "From a Top Student: TYT Mathematics Practice Test Solution with All Strategies" reached approximately 547K views, while videos with more neutral and content-focused titles such as "Mega Practice Test Solution" or "Practice Test Difficulties" remained within the range of 9.6K to 15K views. Although the video durations are comparable, the viewing performance differs markedly, suggesting that title strategies emphasizing personal success narratives and strategic promises play a decisive role in algorithmic visibility. This descriptive quantification supports the argument that algorithmic ranking privileges attention-oriented title constructions over pedagogical neutrality.

In searches related to history courses, assertive expressions such as "certain topics that will appear on the exam" or "final review" were observed to come to the forefront. A large portion of these videos consist of long-format content; however, exaggerated promises are once again employed in their titles to gain visibility. This indicates that even videos with high pedagogical value are compelled to use popularity-oriented strategies in order to achieve algorithmic visibility.

Figure 5. Algorithmic Ranking of Suggested Videos in the Searches for "TYT and AYT History"



Source: https://www.youtube.com/results?search_query=TYT+ve+AYT+Tarih

Table 5. Classification of Videos on "TYT and AYT History" Based on Title Structure, Channel Type, and View Data

Video Title	Channel Type	Video Duration (minutes)	View Count	Title Structure Feature
TYT – AYT History General Review Camp – Gökhan ÖZ – 2025	Education	586	297K	Indicates that it is a comprehensive video.
AYT History Full Review Single Video ZEDUVA HISTORY	Education	93	66K	Indicates that it is a comprehensive video and states its purpose.

2025 TYT HISTORY FINAL REVIEW | CERTAIN TOPICS THAT WILL APPEAR	Education	61	215K	Uses assertive words to attract attention.
AYT Turkish Language and Literature Review Camp – Kadir GÜMÜŞ – 2025	Education	550	11K	Aims to put the student into a structured routine.
AYT HISTORY FINAL REVIEW – Summary – Targeted Topics #aythistory #aythistory2024 #ykshistory	Education	80	171K	Indicates that the video will not be repeated and makes use of hashtags.

Overall, the findings indicate that YouTube's search algorithm prioritizes criteria such as attractiveness, promises, and popularity rather than pedagogical value when ranking educational content. The analyzed data reveal that algorithmic visibility is determined not only by content quality but also by the language of titles and presentation strategies. However, an important limitation must be noted: the data obtained consist solely of rankings based on the search algorithm. Therefore, personalized recommendation systems remain outside the scope of this study. Nevertheless, the literature (e.g., Gillespie, 2018; Noble, 2018) emphasizes that search algorithms are not neutral, as they highlight content according to popularity and engagement criteria. In this context, gaining visibility for educational content largely depends on adapting to the logic of algorithmic ranking.

CONCLUSION

This study examined the visibility of educational content on YouTube within the context of algorithmic decision-making mechanisms. The findings revealed that the visibility of educational content is determined less by its pedagogical value and more by algorithmic compatibility and strategies of attractiveness. In particular, promises of high achievement, emphasis on the current year, tactic/strategy-oriented expressions, and exaggerated claims in video titles emerged as the most decisive factors in gaining visibility. This demonstrates that educational content is being reshaped within the logic of popularity (Timur, 2023).

The research findings are in parallel with those previously presented in the literature. Gillespie (2018) emphasizes that algorithms are not neutral and that visibility is determined by commercial interests, popularity, and engagement criteria. Similarly, Noble (2018) defines algorithmic structures as mechanisms that reproduce social biases. The findings of this study also reveal that, in order to gain visibility, educational content must rely on algorithmic visibility strategies beyond its pedagogical quality. In this way, the study provides an original contribution to the literature on algorithms—largely discussed in the context of news, entertainment, and popular culture—by situating the discussion within the framework of educational content.

The study also opened the discussion of the concepts of digital labor and surveillance capitalism within the context of educational content. As Fuchs (2020) points out, the content produced by users must conform to algorithmic criteria in order to gain visibility. This increases the invisible labor of producers, while simultaneously serving the processing of user data for commercial purposes within the logic of surveillance capitalism as defined by Zuboff (2019). Although educational content is expected to focus on social benefit, it is drawn into commodified relations of visibility due to the directive logic of algorithms.

Another significant point revealed by the findings is the distinction between the search algorithm and the recommendation algorithm. This study examined only results based on the search algorithm. However, even within search algorithms, it was observed that popularity and engagement criteria are decisive. This finding demonstrates that educational content is ranked not solely on the basis of its pedagogical value, but according to its alignment with algorithmic criteria. This distinction suggests that future studies could achieve more comprehensive results by considering the personalized guiding power of recommendation algorithms alongside search algorithms.

The limitations of the research should also be taken into account. The study relied exclusively on metadata such as video titles, channel types, view counts, and durations. Therefore, user experiences or the motivations of content producers were not directly examined. Nevertheless, the current findings shed light on the relationship between algorithmic structures and educational content, contributing to a gap in the literature.

In conclusion, this study has demonstrated that the visibility of educational content on YouTube is constrained and directed by algorithmic decision-making processes. Educational content is ranked according to criteria of popularity rather than pedagogical benefit, which constitutes a serious issue in terms of social utility. In this context, the following recommendations can be developed:

- **Platform policies:** YouTube and similar platforms should develop algorithmic criteria specifically for educational content and implement transparent regulations that increase the visibility of content with high pedagogical quality. In this context, pedagogical quality does not need to remain an abstract or normative concept but can be translated into measurable algorithmic indicators. Such indicators may include average watch time relative to video length, completion rates for long-form educational videos, the coherence between video duration and content depth, and qualitative engagement reflected in comment sections (e.g., question-oriented or explanatory interactions rather than purely emotive reactions). By prioritizing these indicators over click-based metrics such as exaggerated titles or short-term engagement spikes, platforms could algorithmically distinguish educational content that supports sustained

learning processes from content optimized primarily for visibility. This approach would enhance the practical applicability of pedagogy-oriented algorithmic criteria.

- **Public authority and regulation:** The visibility of educational content should not be left solely to market logic; instead, it should be regulated within the framework of transparency and accountability principles, taking public interest into consideration.
- **Support for content creators:** Individuals and institutions producing educational content should not be condemned to compete solely within algorithmic structures; rather, they should be encouraged through public and institutional support in the production process.
- **Future research:** The personalized nature of recommendation algorithms should be examined together with user experiences and producer motivations in order to achieve more comprehensive results.

These recommendations will enable educational content to contribute not only to the competition for visibility but also to a digital ecosystem that serves the public good.

YOUTUBE VE ALGORİTMİK TAHAKKÜM: EĞİTİM İÇERİKLERİNİN GÖRÜNÜRLÜĞÜ ÜZERİNE ELEŞTİREL BİR ANALİZ

1. GİRİŞ

Bu çalışma, YouTube platformunda yer alan eğitim içeriklerinin algoritmalar aracılığıyla nasıl görünürlük kazandığını veya görünmezleştiğini eleştirel bir perspektiften incelemektedir. Çalışmanın temel çıkış noktası, dijital platformlarda içerik görünürlüğünün pedagojik değerlerden ziyade algoritmik uyum, popülerlik ve dikkat çekicilik gibi ölçütlerle belirlendiği iddiasıdır. Araştırma, gözetim kapitalizmi (Zuboff), dijital emek (Fuchs) ve eleştirel algoritma çalışmaları literatürünü kuramsal temel olarak benimsemiş; bu çerçevede eğitim içeriklerinin görünürlük koşullarını eleştirel kuram perspektifiyle tartışmayı amaçlamıştır.

2. YÖNTEM

Çalışma, nitel araştırma tasarımı içinde gözlem ve içerik analizi yöntemlerini kullanmaktadır. Türkiye'de milyonlarca öğrenciyi doğrudan ilgilendiren merkezi sınavlar (LGS, TYT, AYT, YKS ve KPSS) araştırmanın örneklem alanı olarak seçilmiştir. Bu sınavlara ilişkin anahtar kelimelerle yapılan YouTube aramaları, anonim tarayıcı modunda gerçekleştirilmiş ve elde edilen veriler belirli kategoriler çerçevesinde kodlanmıştır. Video başlıkları, kanal türleri, süreler ve izlenme sayıları görünürlük kriterleri olarak değerlendirilmiştir.

3. BULGULAR

Elde edilen bulgular, eğitim içeriklerinin görünürlüğünün pedagojik değerleriyle değil; başlık stratejileri ve popülerlik ölçütleriyle belirlendiğini ortaya koymaktadır. Özellikle "yüksek başarı vaatleri" ("+20 net"), "güncel yıl vurguları" ("2025 TYT"), "strateji/taktik söylemleri" ve "abartılı ifadeler" ("tek videoda tüm konular") içeren başlıkların algoritmik sıralamalarda avantaj sağladığı görülmüştür. Bununla birlikte, kısa süreli ve dikkat çekici videoların daha fazla izlenme aldığı, uzun ve nitelikli içeriklerin ise görünürlükte dezavantajlı konumlandığı belirlenmiştir. Bu durum, içerik üreticilerini algoritmik uyum sağlamak için sürekli dijital emek harcamaya zorlamakta, böylece eğitim içeriklerinin üretim ve tüketim süreçleri gözetim kapitalizmi mantığı içerisinde ticarileştirilmektedir.

4. TARTIŞMA

Çalışma, algoritmaların tarafsız olmadığını ve özellikle eğitim içeriklerini geri plana iten yapılar içerdiğini vurgulayan literatürle uyumludur (Gillespie, 2018; Noble, 2018). Eğitim içeriklerinin görünürlüğü, piyasa mantığına dayalı popülerlik kriterleriyle sınırlandığında, bireysel öğrenme süreçleri kadar kamusal fayda ve fırsat eşitliği de olumsuz etkilenmektedir. Dolayısıyla, YouTube gibi dijital platformların

eğitimde fırsat eşitliği sağlama potansiyeli, algoritmik tahakküm altında sınırlı kalmaktadır.

SONUÇ

Araştırma, YouTube'da eğitim içeriklerinin görünürlüğünün algoritmik karar süreçleri tarafından şekillendirildiğini ve bu sürecin pedagojik faydayı geri plana ittiğini göstermektedir. Bu bağlamda üç temel öneri geliştirilmiştir:

Platform politikaları: Eğitim içeriklerine özgü algoritmik kriterler geliştirilerek pedagojik niteliği yüksek içeriklerin görünürlüğü artırılmalıdır.

Kamu otoritesi ve düzenleme: Eğitim içeriklerinin görünürlüğü yalnızca piyasa mantığına bırakılmamalı, şeffaflık ve hesap verebilirlik ilkeleri çerçevesinde düzenlenmelidir.

İçerik üreticiler için destek: Eğitim içerikleri üreten bireyler ve kurumlar, yalnızca algoritmik rekabete mahkûm edilmemeli, kamusal ve kurumsal teşviklerle desteklenmelidir.

Bu bulgular, algoritmaların toplumsal etkilerini eğitim bağlamında tartışarak literatüre özgün bir katkı sunmakta; eğitim içeriklerinin görünürlük sorunsalını gözetim kapitalizmi ve dijital emek kavramlarıyla ilişkilendirerek yeni bir tartışma alanı açmaktadır.

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