Literacies against the Clock

Why TikTok's 'For You Page' demands new approaches in counteracting information disorder

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Following the 2022 Ukraine conflict, media literacy skills have been presented as one of the core solutions to counteracting information disorder on TikTok. But because of TikTok's affordances, practicing these skills could potentially send people down a rabbit hole of content similar to the content of which they doubt the reliability. In the upcoming article, we explore this discrepancy by reviewing the literature on media literacies and the algorithm driving the TikTok 'For You Page' recommendation system.

Introduction

Propaganda, misinformation, disinformation, and 'fake news' have always been a part of war. But during the Russian invasion of Ukraine - what has been called the "World's first TikTok war" (Chayka, 2022) - there seems to be more information disorder than in any war before. TikTok is a socio-technological platform where users make, remix, share and view short videos. Since its foundation in 2016, it has reached over 1 billion (mainly teenage) active users (Guinaudeau et al., 2021). This makes TikTok one of the new centres of global communication (Newton, 2022) and an important source of information on the Ukraine conflict for many people.

TikTok offers several distinctive affordances, such as the 'reusable sound'-functionality, which allows users to copy the sound of a TikTok video and combine it with a new or existing video, the use of a digital 'green screen' and automatically generated voice overs. Importantly, TikTok's logic is also defined by the pervasive algorithm driving the 'For You Page' (FYP) recommendation system, which quickly figures out users' interests (Wall Street Journal, 2021). As new affordances always do, these offer new possibilities and opportunities along with new risks and dangers concerning information disorder (Messaris, 2012).

In reaction to the increased amount of information disorder (Wardle, 2017) on the platform following the Ukraine conflict, TikTok took counteractive measures, e.g. increasing AI- and human-based moderation (TikTok, 2021a; Pasqual, 2022). More importantly, however, they turned to the promotion and development of media literacy skills among its users with several new and revived campaigns (Den Boer & De Munnik, forthcoming). In the upcoming analysis, we will examine the potential efficacy of these media literacy skills on TikTok. But first, it is useful to situate our research in the ongoing discussion on the efficacy of literacy skills in counteracting information disorder in general.

Media literacies and information disorder

In the past years, media literacy skills have often been positioned as the solution to the proliferation of information disorder (e.g. Western Sydney University, 2020; Harrell & Glick, 2021; Vdovychenko, 2022). These skills are therefore widely developed in both a top-down, macro-level, overt, explicit and *de jure* manner, and in a bottom-up, micro-level, covert, implicit *de facto* manner (Johnson, 2013). But there are also opposing voices to be heard. Mihailidis and Viotty (2017) argue that media literacies need to be repositioned for the post-truth era. An empirical study by Jones-Jang, et al. (2019) suggests that it is only 'information literacy' that actually helps to counteract information disorder, rather than the comprehensive complex of media literacies. And experiments by Fazio et al. (2015) indicate that awareness of the falseness of information is not enough to withstand the deceptive power of repetition and persuasion tactics.

Discrepancy between media literacies and TikTok's algorithm

Despite the academic uncertainty surrounding the efficacy of media literacy efforts in counteracting information disorder, we find media literacy practices at the core of campaigns against information

disorder on TikTok. Traditional media literacy skills used for counteracting information disorder might become problematic on TikTok, however. There is a discrepancy between several core media literacy skills (e.g. critical evaluation, thorough analysis, source and fact checking) and the importance of watch time as a metric of interest to the algorithm driving TikTok's 'For You Page' recommendation system. We argue this discrepancy might actually lead users to be faced with more distorted information surrounding the Ukraine conflict rather than less.

A more thorough understanding of this discrepancy could aid institutions aimed at diminishing information disorder and/or media literacy education in developing valuable and effective approaches to counteract information disorder on TikTok. In what follows, we explore this discrepancy in greater depth by reviewing the current literature on the topics of digital media literacies and the TikTok algorithm.

Digital media literacy policies and practices on TikTok

In order to gain a deeper understanding of how digital media literacy skills are defined, developed and put into practice on TikTok, we follow a funnel-shaped research structure. First, we will examine global media literacy definitions and policies at the macro level by comparing seven institutions that implement and develop media literacy skills in a top-down manner: the International Federation of Library Associations and Institutions (IFLA), Debunk EU, the European Association for Viewers Interests (EAVI), the European Commission, NAMLE, isdatechtzo.nl, and Nieuwscheckers. Secondly, we will zoom in on top-down media literacy policies (Johnson, 2013) imposed by TikTok. Finally, we zoom in even further to the micro level of individual TikTok users in order to analyse how they develop and practice media literacy skills using a bottom-up approach (Johnson, 2013).

Defining media literacy and categories of practice

Different institutions give different definitions of 'media literacy', but they all show notable similarities to the definition given by UNESCO (n.d.): "A set of knowledge, skills, attitudes, competencies and practices that allow [people to] effectively access, analyse, critically evaluate, interpret, use, create and disseminate information and media products with the use of existing means and tools on a creative, legal and ethical basis." Taking this definition as a point of departure, the seven institutions subjected to analysis give people advice on how to deploy media literacy skills to recognize and counteract information disorder. Again, there are differences between the advice given by different institutions. But there are also similarities, which can be captured in seven distinct categories of practice (see Appendix A).

Six out of seven institutions stimulate people to (1) consider the source and publisher of the information. Five institutions advise people to (2) closely inspect the content in order to determine whether it appears credible. Four speak about (3) considering the context of the information such as the date and place of publication, and (4) searching extra sources to fact-check or contextualize the information. Finally, two institutions advise people to (5) consider their own standpoints, biases and reactions, (6) consider the economic, political, and personal goals of the author or publisher, and (7) consult experts to gain further knowledge on the topic.

How TikTok educates its users

In addition to social institutions, TikTok itself also implements and develops media literacy skills among its users in a top-down manner. In these efforts we again recognize several of the categories of practice mentioned above. For example, TikTok partnered up with the National Association for Media Literacy Education (NAMLE) to launch the 'Be Informed' video series (TikTok, 2020), in which TikTok influencers teach users to question the source, content, and their biases - reflecting category 1, 2 and 5. Other examples are #FactCheckYourFeed; a campaign by TikTok aimed at equipping the community with skills to critically engage with content, a 'Digital Literacy Hub' where popular content creators educate users on the guidelines and how to recognize disinformation, and educational videos on "Digital Literacy 101" (TikTok, 2020). Notably, within many campaigns, TikTok's media literacy efforts focus specifically on affordances native to the platform such as inspecting the reusable sound that is used in videos (category 2), checking the date a video was posted (category 3), or investigating the account posting the video (category 1).

How users approach media literacy skills

In bottom-up practices by TikTok users, similar approaches are recognizable. Users give each other advice on how to spot and counteract information disorder. An emblematic example is Abbie Richards (@tofology), who gives explicit media literacy advice to her viewers similar to the advice TikTok gives in their campaigns, saying "make sure the audio is from the video that you're watching" (category 2) and "stay calm and stay sceptical", for example (for a comprehensive review of bottom-up practices, see Den Boer & De Munnik, forthcoming).

Although specific advice and practices differ between institutions, TikTok campaigns and users, this analysis shows that both top-down and bottom-up media literacy approaches almost always encourage people to take their time to critically and analytically evaluate the content and contexts they encounter in order to discern reliable information form possibly misleading information. In order to examine the potential efficacy of these practices in the context of TikTok, it is important to take into account the driving force behind the platform: the algorithm.

TikTok's algorithm

TikTok's rise in popularity over the last five years has largely been attributed to the algorithm that guides the recommendation system for the For You Page (MIT Technology Review, 2021; Zeng et al., 2021; Boeker & Urman 2022). The FYP is the primary interface through which users interact with

content on TikTok, consisting of an 'infinite scroll' of videos. Despite its importance in guiding and determining the experience of over one billion monthly TikTok users (TikTok, 2021b), little research has been done on this core feature (Boeker & Urman, 2022), partly due to the 'black box' nature and secrecy surrounding it (Pasquale, 2015; Wall Street Journal, 2021). Even though the amount of research currently available is limited, we will dedicate the following sections to the most relevant insights available regarding the goals, functionality and implications of the FYP algorithm.

Goals of the FYP algorithm

The most important goal of the TikTok algorithm is to increase the amount of daily active users on the platform. The two prime metrics the algorithm is designed to maximize in order to achieve that goal are "time spent" and "retention" (Smith, 2021). These are common goals among online platforms, since user activity generates user data which can be sold to advertisers and data brokers (Van Dijck et al., 2016). But TikTok is different from other major socio-technological platforms such as Facebook or Instagram "in [that] its content distribution approach is purely algorithmic-driven" (Boeker & Urman, 2022), rather than driven by the network of accounts users follow.

In order to maximize time spent and retention, the FYP algorithm is designed to optimally match content to user personas (Zhao, 2021). These user personas are drawn up based on user interactions (likes, shares, comments, etc.), watch time (how long do they linger on videos) and device and account settings (language, location, etc.). On the FYP, the algorithm feeds each user content based on how well the content information (visuals, hashtags, sounds, captions, etc.) matches the user persona (Hind, 2020). This user persona is constantly updating, meaning that "the longer the user uses [TikTok], the more the algorithm will understand the user" (Zhao, 2021).

The importance of watch time

An investigation by the Wall Street Journal (2021) further emphasized the importance of watch time, claiming it is the only metric the algorithm needs to determine a user's interest based on which subsequent videos will be recommended. The longer a user lingers on a video, the more likely they are to receive similar content on their FYP (Wall Street Journal, 2021). This dynamic has been shown to quickly drive users into niches - and eventually 'rabbit holes' (Ledwich & Zaitsev, 2020) or 'filter bubbles' (Pariser, 2011) - where they encounter increasingly similar content with less overall popularity which is subsequently less moderated by TikTok (Wall Street Journal, 2021).

Empirical research by Boeker & Urman (2022) elaborates on these findings, suggesting watch time is attributed similar importance as likes. But there are important differences between these two metrics. Liking is a conscious expression of positive user engagement, whereas watching is a passive expression of user engagement that is also likely to take place if a user experiences anger, disgust, shock, sadness, etc. Additionally, users have the ability to unlike a video, but they can't unwatch a video. This is problematic, since it severely limits the users' control over their data and the behaviour of the algorithm (Boeker & Urman, 2022). When it comes to watch time, all feedback is positive feedback for the FYP algorithm. This creates a notable discrepancy between media literacy skills – which inherently take time to put into practice – and the logic of TikTok, which will be elaborated on in the following sections.

Conclusion and discussion

The Ukraine conflict has established TikTok as the centre of a new age of information disorder. To counteract the new challenges this poses, media literacy skills are positioned as a central solution to the proliferation of information disorder. The current analysis, however, reveals a considerable discrepancy between several core media literacy practices and the core characteristics of the algorithm guiding TikTok's FYP recommendation system.

Both top-down and bottom-up media literacy approaches almost always encourage people to take their time to critically and analytically evaluate the content and contexts they encounter in order to discern reliable information from possibly misleading information. However, as the FYP algorithm regards watch time as a core metric of interest, the increased watch time needed for critical evaluation might be interpreted as a sign of interest or even affect. The more time users take to judge the reliability of a TikTok video, the larger the amount of similarly questionable videos on their FYP might get. Following TikTok's logic, this could potentially create a positive feedback loop, leading users down a rabbit hole of information disorder.

This insight could prove valuable for institutions, platforms and users that develop, implement and put into practice media literacy skills, since it questions the practical implications of the most fundamental media literacy skill, critical thinking, in the context of TikTok. This would demand new approaches in counteracting information disorder.

Avenues for further research

The current analysis and resulting insights are merely based on existing literature and public information. Empirical research methods should be deployed in order to substantiate these findings. Possible avenues for further research include quantitative methods, e.g. network analysis or experimental research, which could examine the exact relationship between media literacy practices, the resulting increased watch time, and an increase of information disorder on the FYP in more detail. To examine this, Boeker & Urman's (2022) offer a relevant blueprint for future research with their sock-puppet experiment, in which they created a large number of TikTok accounts in order to 'reverse engineer' the FYP algorithm. A similar approach was deployed by the researchers at the Wall Street Journal (2021).

Additionally, we could gain a deeper understanding of how the discrepancy between media literacy skills and the FYP algorithm influences user behaviour by adopting qualitative, ethnographic research methods, e.g. discourse analysis and ethnographic interviews. A useful concept in this regard could be that of 'algorithmic folk theories', which DeVito et al. (2017) and Karizat et al. (2021) use to describe how users fill in the gaps in their knowledge about the inner workings of an algorithm and how this influences their relationship towards the algorithm and their subsequent behaviour.

Substantiating the findings of the current analysis with empirical research could prove valuable for TikTok, its users and society at large in counteracting information disorder.

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Appendix A

Name	Country / region	Source	1. Consider the source	2. Consider the content	3. Consider the context	4. Consult extra sources	5. Consider yourself	6. Consider the goals	7. Consult experts
IFLA	International	(IFLA, 2017)	✓	✓	✓	✓	✓		✓
Debunk EU	International	(Debunk EU, n.d.)	✓	✓	✓	✓			
EAVI	EU	(EAVI, 2021)	✓	✓	✓	✓	✓		
EU	EU	(Casey, 2022)				✓			✓
NAMLE	USA	(Scheibe & Rogow, 2011).	✓	✓	✓		✓	✓	
Nieuwscheckers	NL	(Nieuwscheckers, 2020)	✓			✓			
Isdatechtzo	NL	(Isdatechtzo?, 2022)	✓	✓	✓			✓	✓

Categories

1. **Consider the source:** who is the source? who is the author? where is it published? who is sharing this? is this the original source? etc.
2. **Consider the content:** read the entire article, see if the photos and videos are credible, see if the graphs are correct, is it too good/bizarre/absurd to be true? etc.
3. **Consider the context:** check the publication date, where did you find the information? check the URL, etc.
4. **Consult extra sources:** what are other people/media saying about this subject? Are the sources in the information reliable? More people share this information? Can you also find a different opinion/approach/sound? etc.
5. **Consider the goals:** does the resource or the person sharing it have an economic/political/ideological/personal motive? What is the purpose of the information (shock, amuse, parody, inform, inspire, etc.)?
6. **Consider yourself:** what are your own biases? What kind of (emotional) reaction does the information evoke in you? etc.
7. **Consult experts:** consult experts, fact checkers or institutions, etc. to assess the reliability of information.

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