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Writing for Algorithmic Audiences

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Abstract

This article examines the role that algorithms may play as audiences when teaching writing on the World Wide Web. It argues that introducing the provisional term "algorithmic audience" reflects three prior conceptions of audience, including concrete situations, discourse community, and participatory audiences. It then offers a three-part classroom approach: identifying the biases of those who design algorithms, managing metadata, and anticipating audience response. I argue that the term "algorithmic audience" may help students to write for audiences beyond the instructor from within the confines of the classroom.

Keywords: Audience; Algorithm; Web 2.0; Web-writing; Participatory audience

On the World Wide Web, writers have more work than simply writing. In "When Writing Becomes Content," Lisa Dush notes that writers act as content producers and possess a wide variety of responsibilities (Dush, 2015). Writers, as content producers, contend with marketing, advertising, and programming. This means they take on multiple roles: circulating content on various social media platforms, monitoring website analytics, curating metadata, managing comments, and recirculating older writing to new venues. As writers perform these activities, moving content throughout the web, who or what are these writers producing content for? What role does the term *audience* play for these writers? In this article, I address an overlooked aspect of these two questions by suggesting that algorithms may form a critical component of a writer's audience. I argue that teaching students to write for internet contexts should involve considering the role that algorithms may play as audiences. In doing so, I reaffirm the relevance of the term audience for web-writers while introducing *algorithmic audience* as a provisional concept for teaching web-writing.

In general terms, an algorithm is a set of instructions for performing a task or solving a problem. A cooking recipe, for instance, is an example of an everyday algorithm. In the context of this article, algorithms as input/output functions process a text and yield a result. On the World Wide Web, algorithms sort, distribute, and organize websites, writing, and content. In doing so, *algorithms* evaluate, structure, and influence writing and other discursive information. To write for algorithmic audiences means to write for algorithmic procedures, which Kevin A. Brock (2014) describes as "fundamentally involv[ing] a set of operations meant to complete a task. These operations demand the computation of one or more variables for the operations to be successfully examined, undertaken, and completed" (1). For example, Google uses algorithms to structure its search results. Social media companies use algorithms to structure what users see in their newsfeeds. Algorithms frequently order and circulate web-writing, such as what stories are "trending" on various social media platforms. Alternatively, the online retail giant Amazon uses an algorithm to determine what products to show customers as they peruse the website. An individual who writes product descriptions on Amazon

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may conceive of the company's algorithm as an audience. This writer conceives of the various keywords that potential customers would input and the way that Amazon structures its search results. The algorithm is part of this writer's audience. Writers in these contexts are able to design and situate their content in ways that an algorithm can pick up and prioritize.

As sets of instructions and procedures, algorithms are, at their most basic level, a text written by individuals or teams of designers, coders, or content producers. From this perspective, writing for algorithmic audiences means to write not only for the algorithm's input/output functions *but also* for the structure and sociality that goes into that function. If we are to teach students to write and produce content for the Web effectively, then we may consider algorithms as an audience while understanding that this audience can change depending on a host of factors, including nonhuman factors (e.g., changes in code, algorithmic variables, changes in interfaces, and software advances) and human factors (e.g., who writes the code and algorithms, designs interfaces, and decides on software updates and when to implement these updates).

This article is divided into four parts. I first describe algorithmic audience as a provisional attempt to capture the tension between human and nonhuman factors. I offer two examples of writing for algorithmic audiences and then argue for the term's pedagogical value. Second, I lay out how this term is applicable to composition's broader conversations about audience. Third, I describe a classroom approach for integrating writing for algorithmic audiences. Lastly, I identify how algorithmic audiences can move our teaching beyond the platitude of "consider your audience."

1. An Extended Description of Algorithmic Audience

In using the term *algorithmic audience*, I aim to capture the tension between human and nonhuman factors when writing and producing content for the Web. On the one hand, algorithms have no agency of their own because someone or something else authors them. In short, algorithms have no intentions. An algorithm may update the results of its instructions and procedures (through what computer scientists label algorithmic efficiency), but it is ultimately a set of procedures—an idea that digital rhetoricians such Jim Brown (2015) and Steve Holmes (2014) have come to label procedural rhetoric via Ian Bogost's work—that yields results in predictable ways.[1] In spite of their seemingly autonomous response, these results are authored and require people to write the code that produces them. In this sense, to write for algorithmic audiences means to consider the people who design and program an algorithm.

On the other hand, algorithms are objects distinct from their authors. Because algorithms are fundamentally a set of operations, they can escape the intentions of those who authored them and yield unintended results. They may even make decisions without the consent of those who write them. They have something akin to agency in the sense of having an effect in the world, but without any intention or responsibility for those effects (in both helpful and deleterious ways). That effect comes from algorithms' programmed purpose, production of results.

Let me offer two concrete examples of writing for algorithmic audiences to highlight the human and nonhuman elements of the term. The first involves Facebook's algorithmically driven timeline. The second is publishing videos to YouTube. On platforms such as these, individual contributions are just one among millions, if not billions. Writers need to contend with this obstacle to reach their audience. Thus, when teaching students to write for environments on the Web, we often draw on concepts of distribution and circulation, such as spreading writing within and across social media platforms. Students might write blogs or for hobby websites but they also need to circulate their messages on social media sites, e.g., Facebook, Twitter, Instagram, and Snapchat, in order to build, find, and create a readership.

I choose Facebook because it is a useful starting point for students to circulate their content and due to the site's ubiquity. While many websites have diverse algorithms that prioritize certain characteristics of content, the layout of Facebook's timeline provides an emblematic moment that captures the tension I previously described. Recent posts can be displayed in Facebook's newsfeed (RSS feed), but the algorithm defaults the display to "popular," which emphasizes recent *interactions* with a post. If a student writes a post that receives numerous "likes" on Facebook, for instance, that post will be prioritized in the newsfeed of that student's friends—even if it is not the most recent. The student might also comment on an older photograph with many "likes" in order to push that post back into the newsfeed of their friends. By attending to content in this way, the student demonstrates an awareness of Facebook's algorithm as part of their perceived audience. Teaching this type of awareness and habit means that in addition to teaching students to write

[1] Other authors have focused implicitly on ways that algorithms yield unpredictable results, including Casey Boyle (2015).