Appendix 2: Reflection

Workshop scope and evolution:

The workshop was developed largely to support users in more critically evaluating online information, search result rankings, and digital tools. While the original workshop focused mainly on search, the workshop has evolved to address the wide-reaching impact of algorithms and algorithmic (in)justice on everyday life. Within the time constraints of this workshop, the goal is not for participants to understand algorithms and digital tools with the technical expertise of a computer programmer but rather to recognize the “black box” nature of most algorithms, to challenge the notion of digital tools as neutral, and to reflect critically on the information and the choices that individuals encounter through use of these tools. With greater awareness of algorithmic bias, participants will hopefully be better positioned to make more conscious and informed choices about how they use digital tools and how they evaluate and use the information that they access through those tools. Workshop attendees have appreciated the wider-lens view that the workshop has developed and have often commented at the end of the workshop that they had not previously realized the degree of algorithms’ influences on everyday life and social inequities, both for themselves and different communities.

Workshop structure:

The workshop template was initially created for an online synchronous format and includes key concepts and guiding questions, reflection and discussion prompts, short videos accompanied by question prompts, and tools and tips for reducing the effect of “filter bubbles” on search results. The choice of content and activities can be modified for different audiences and teaching contexts. The workshop facilitator may want to develop their own notes about key points they would like to address with the group while keeping in mind that often workshop participants take discussions in generative directions that the facilitator may not have anticipated. Most of the discussion questions are intentionally open-ended to allow for exploration, the sharing of perspectives, and new knowledge creation.

Participation and activity facilitation: Throughout the workshop, participants are invited to reflect on how their lives, experiences, and communities are affected by algorithms. Participants are also asked to challenge the common misconception that technology is neutral or that the impact technologies have are easily seen. As in almost any teaching context, being flexible and responsive to participants will help to make the workshop more meaningful for everyone. In both online and in-person settings, some participants or groups of participants will gravitate more toward adding content to the shared document, while others may be more active in the synchronous discussion. When introducing a new discussion prompt, it is generally recommended to allow participants time to reflect and add thoughts to the shared document before moving to live discussion and commentary on the content added to the shared
This reflection time is especially beneficial for more reflective learners and quieter individuals. It also allows all participants to read and reflect on other participants’ thoughts. When activity in the shared document ends or slows down, the facilitator can transition to live discussion.

In groups having a more active conversation, the facilitator may need to end a specific activity before everyone has spoken or shorten or skip selected activities. If a facilitator is familiar with all of the workshop content and activities, they will be better able to decide during the workshop if/how to shorten or skip certain workshop material. The workshop template includes time estimates for activities that can be modified before or during the workshop.

**Conceptual understandings and mindsets:** The workshop is designed with the understanding that algorithmic injustice and bias are systemic issues that do not have easy fixes and, at the same time, that algorithmic injustice and algorithmic bias are issues that all global citizens can work to address through increased awareness, education, and advocacy. The workshop facilitator can acknowledge the issue’s complexity while also conveying hope and possibility and encouraging participants to identify and explore ways to counteract the negative effects of algorithmic bias. These approaches include, but are not limited to:

- Increasing their own awareness of how algorithms influence the information and the choices that are presented to people in online environments. With this growing awareness, individuals are better able to reflect critically on the information that they see and upon which they choose to click or act.
- Using simple privacy tools that can reduce (albeit not eliminate) the degree to which online personalization and tracking influences search results and online experiences.
- Approaching algorithmic awareness and algorithmic justice as systemic issues that need to be understood and responded to through individual and collective action and advocacy, and with an understanding that advocating for more just information systems is a long-term project.