

Advancing Search Mastery Education: Sharing Experiences & Exploring Possibilities

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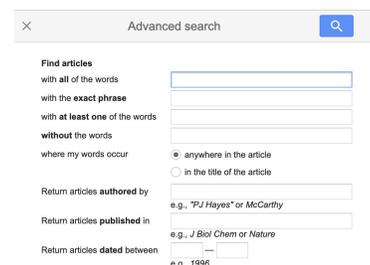
Abstract (<150 words)

Search mastery refers to students' knowledge, skills, and abilities to optimally use and critically evaluate publicly available search platforms to discover and select documents, images, video, and data needed for problem-solving and decision-making. While search mastery constitutes only a small subset of the topics considered in a comprehensive information literacy education program, its centrality in almost every aspect of modern society makes it a critical aspect of student success both in academia and beyond. The goals of the proposed session are to increase participants' knowledge of strategies for assessing and teaching search skills within particular courses, through co-curricular activities, and across the curriculum of an academic program. Session participants will share observations and data they have about their students' level of search mastery; exchange lessons-learned from efforts to develop search mastery, and develop creative approaches for improving the students' search knowledge and skills in their courses and programs.

Session Description (<1000 words)

From basic research and professional success to entrepreneurship and civic participation, many of the aspirations we have for students (undergraduate and graduate) share an underlying requirement -- they must be able to discover, evaluate, select, and apply information from diverse sources in order to solve problems and make decisions.

Search mastery refers to students' knowledge, skills, and abilities to optimally use and critically evaluate Google, Bing, Stack Overflow, and other publicly available search platforms as tools for discovering and retrieving documents, images, video, and data. Once the sole province of specialists, the ubiquity of search platforms promotes a false sense of competence, with many students believing they are master searchers, despite their superficial knowledge of search platforms. Thus, while search



The image shows a screenshot of an "Advanced search" interface. It features a search bar at the top right with a magnifying glass icon. Below the search bar, there are several sections for refining search results:

- Find articles**: A section with four radio button options: "with all of the words", "with the exact phrase", "with at least one of the words", and "without the words".
- where my words occur**: A section with two radio button options: "anywhere in the article" (which is selected) and "in the title of the article".
- Return articles authored by**: A text input field with the example "e.g., 'PJ Hayes' or McCarthy".
- Return articles published in**: A text input field with the example "e.g., J Biol Chem or Nature".
- Return articles dated between**: Two text input fields for a date range, with the example "e.g., 1996".

mastery constitutes only a small subset of the topics considered in a comprehensive information literacy education program, the centrality of search platforms in almost every aspect of modern society makes it a critical aspect of student success both in academia and beyond.



While there are many opportunities for students to gain ad-hoc experience working with search platforms, instructors may struggle to find opportunities to develop students' basic search knowledge and skills. As students' learning and study increasingly move online, this need has only grown.

At the University of Maryland we have embarked on a comprehensive effort to promote search mastery education within the College of Information Studies, the University, and beyond. The primary goal is to significantly reduce the effort required to incorporate search mastery skills development into existing assignments and courses, allowing faculty to increase students' substantive exposure and thoughtful experience with these critical tools in the context of their overall education. Secondly, it is expected that the resources and materials provide a starting point for faculty and teaching librarians to engage with students on a broader set of information literacy topics ranging from search engine technologies to information-based inequality and algorithmic bias.

The goals of the proposed Session of Interaction and Engagement (SIE) are to increase participants' knowledge of strategies for assessing and teaching search skills within particular courses, through co-curricular activities, and across the curriculum of an academic program. Session participants will share observations and data they have about their students' level of search mastery; exchange lessons-learned from efforts to develop search mastery, and develop creative approaches for improving the students' search knowledge and skills in their courses and programs.

The session is designed to be beneficial for anyone interested in development of search mastery. Participants who have previously taught search mastery will be encouraged to share their experience and receive feedback and suggestions from others. Instructors and academic program leaders interested in integrating search mastery education into their courses or programs will be provided with example materials, assessments, and use cases and will have the opportunity to brainstorm how they might be adapted for use by their students. Individuals who do not have specific courses or programs to work with will have the opportunity to learn about the challenges of and approaches for actively developing students' search knowledge and skills.

The proposed session is organized around two objectives.

- [Search Mastery Education] Participants will learn about an approach for providing basic search mastery knowledge and skills and consider how this approach might be adapted for their courses, programs, and/or students.
- [Search Mastery Assessment] Participants will learn about an approach for assessing Search Mastery and will consider how this approach might be adapted for their courses, programs, and/or students.

Prior to the session, if possible, participants will be asked to complete a short open-ended survey in which they are asked to describe their observations about

students' level of search mastery in their home institutions, their experience with teaching search knowledge and skills, and their level of interest in incorporating search mastery education in their courses or programs.

The session itself will be organized in three segments:

In the first segment, organizers will welcome participants, introduce the idea of search mastery, and share a few indications (some rigorous and others anecdotal) about the current state of and need for improved search mastery. Participants will then break into small groups (4-6 people), introduce themselves, and share their observations about students' level of search mastery at their institutions.

In the second segment, focused on search mastery assessment, the organizers will provide an overview of one assessment approach. Participants will then be asked to complete a sample of assessment questions. In breakout groups, they will be encouraged to critically evaluate the assessment approach, share alternatives they are aware of, and consider how the approach might be adapted for their students.

In the third and final segment, focused on search mastery education materials, the organizers will provide an overview of one set of materials and the strategies that instructors used to adapt those materials for particular undergraduate and graduate classes. In the breakout discussions, participants will be encouraged to share materials and approaches they have previously used to teach search knowledge and skills and to brainstorm how they might adapt the materials described by either the organizers or their colleagues.

After each breakout discussion, individuals will be encouraged to share examples, insights, or observations from the conversation in the chat. This will both facilitate cross-group exchange of ideas and create a written (albeit incomplete) record of the discussions.

Teaching and assessing Search Mastery skills prepares students to thrive in an evolving society, where the discovery and use of online resources is central to almost every aspect of work and life. By providing a mix of examples, discussion, and applications, the proposed session supports the iSchools community's long-term goal of enhancing all students' core information skills and knowledge -- and consequently their ability to succeed as high-impact information professionals.

Offering this session requires use of a virtual discussion infrastructure such as Zoom that is capable of supporting large groups presentation and small breakout groups.