Information Literacy in the Age of Algorithms:
A National Report about Preparing Students for the Next Decade

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Project Lead:

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Project Description

To mark the 10th anniversary of Project Information Literacy (PIL), a special report, "Information Literacy in the Age of Algorithms" will be co-authored by Alison Head, PIL's founding director and principal investigator, and Barbara Fister, PIL's scholar-in-residence and *Inside Higher Ed* columnist. The 25- to 30-page report explores the challenges librarians and educators must face in preparing students to navigate information in the next decade.

When higher education first adopted information literacy as an essential educational outcome in the early 1990s, algorithm-driven tools that students so often turn to for information - Google, YouTube, Facebook - did not exist. Currently, not enough attention is paid to how profoundly our information landscape has changed. Grounded in knowledge gained from Knight Foundation's work on bringing technology innovation to the civic mission of libraries and, more recently, understanding the interplay of journalism, new platforms, and trust in media, this report strives to challenge educators to embrace the challenge of understanding new forms and channels of information beyond academia. The report will bring together emerging scholarship from multiple disciplines to consider today's information environment and its most defining feature — the algorithm.

A discussion will be provided of how these hidden filters influence what students see and learn, and shape what they think and who they are. Moreover, an examination will be included of how these data-driven algorithms, if unexamined and unchallenged, can threaten representative democracy and the cultivation of informed and engaged communities. With this report, Project Information Literacy, the most complete and influential source of basic research into how college students interact with information, will raise pressing questions about what students need to know today and in the coming decade.

The report will focus on three areas of inquiry:

(1) What does a decade of PIL research tell us about the information skills and strategies students actually use, and what new skills students will need to ascertain the authenticity, credibility, and authority of information that comes in new forms, mediated through new and ever-changing distribution channels?

(2) How aware are students of the black-box algorithms that may be dramatically influencing the information they encounter, impacting their ability to distinguish truth from falsehoods and responsible news reporting and analysis from clickbait and propaganda?

(3) What must higher education do to prepare students to understand our new media landscape so they will be able to participate in sharing and creating information responsibly as citizens in a changing and challenged world?

Qualitative data from fall 2019 focus groups with 100+ undergraduates and faculty members at six U.S. campuses will be collected and analyzed to derive deeper insights into their awareness and concerns about the effect algorithms are having on knowledge, and extrapolate what that means for teaching and learning. This report will make recommendations for how key stakeholders -- educators, librarians, technologists, and news and information producers -- can more effectively promote information literacy in the age of algorithms, and better prepare students as information users, sharers, and creators in the coming decade.

Plan of Work
The project will employ a 10-month work plan that will occur from February 28, 2019 through December 31, 2019. The project has five activity stages. Figure 1 provides and overview of each project stage and the different research activities occurring.

	2019				
	Feb. 28, – April 30	**May – Aug.**	**Sept. – Oct.**	**Nov.**	**Dec. 12**
Project Start-up. Assignment of core team: (1) Select PIL research analysts, and (2) conduct literature review of related research, and (3) continue fundraising efforts for project sponsors.	▓				
Stage 1: PIL research trend analysis Analyze PIL conceptual models and key takeaways across 10 studies and since 2009.	▓				
Stage 2: Sample selection and human subjects Undergo IRB review and approval at 6 partner schools. Finalize student focus group and faculty interview scripts, and pilot test and modify.		▓			
Stage 3: Focus groups, interviews, and data analysis Conduct in-person student focus groups (N=65) and telephone faculty interviews (35) at 6 partner schools during summer and fall. Code and conduct trends analysis on qualitative datasets during fall.			▓		
Stage 4: Industry and academic "thought leaders" Host a "thought leader" session at Harvard Graduate School on or by Nov. 12 of Education with librarians, journalists, and educators for generating recommendations.				▓	
Stage 5: Preparation of report deliverable Report and press release released on Dec. 12, 2019.					▓

Figure 1. *Stages and deliverables for "Information Literacy in the Age of Algorithms"*

Statement of Alignment

This proposed report will be written at a time in higher education when not enough attention is paid to how profoundly our information landscape has changed. The report is both a white paper that discusses serious and growing problems with algorithms, information quality, and news engagement and trust, and a research study that reports on what students think about information quality in our so-called "black box society." This research will advance this discussion by: (1) presenting a summary of what has been learned from 10 years of PIL's research on college students' information competencies and skills that also highlights the gaps in students' abilities and practices for the coming decade, (2) providing unique, qualitative findings about young adult's and college faculty's awareness about algorithms and their impact on knowing and learning, based on our student focus group findings, and (3) delivering actionable recommendations for key stakeholders – librarians, educators, technologists, and news and information producers – that consider possibilities for promoting information literacy in light of new and dramatically different circumstances.

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