User Study: Makers & Funders of Documentary Media

Findings report:

Exploring the potential use cases, perceptions, and learning experience of Media Cloud

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Collage: some of our research participants

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Background

In partnership with Purple States production company and the Kellogg Foundation, Media Cloud has conducted this study of potential users who are involved in either creating or funding documentary film or video media, in an effort to better understand potential novice users' impressions and use cases for Media Cloud. Content creators and funders and documentary media are just two among many user types identified by the Media Cloud team who could benefit from their tools, but these findings are the first of their kind exploring the novice researcher's usage and learning experience.

Goals of the study

Findings from this study have been leveraged in the creation of new instructional content to help teach users new to Media Cloud how to get the most out of the tools for their purposes. Findings that may contribute to a larger effort around usability improvements and general product strategy are also noted in this document.

Phasing

The initial version of this report was delivered at the end of the Discovery phase. This report's final version is being delivered at the end of the delivery phase.

Discovery	→	Design	→	Testing	→	Delivery

Activities during the Discovery phase have included team interviews, design of this study, identification of participant criteria, recruitment of participants, an online survey, and involvement in related activities that helped further understanding of the goals of Media Cloud and its users in totality, including academic researchers.

In the Testing and Delivery phase, we drafted a new instructional user guide, tested it, and refined it based on participant feedback.

Discovery: Methodology

Incorporated into this study were a quantitative survey method and a qualitative interviewing/ workshop method.

Survey

An online survey was distributed prior to the interviews to collect an overview of target users' perceptions around news media research tasks related to their work; however, data gleaned was somewhat limited due to low-medium response rate (30 responses total). The survey also functioned as a recruiting and screening tool for individual participants.

Interviews and Workshop

The bulk of the user research effort was focused on the qualitative methods of interviewing participants. We interviewed eleven funders and media makers individually, and also conducted a participatory workshop with documentary media makers (and some researchers) affiliated with MIT's Open Doc Lab.

The methodology for the individual sessions and group session was similar:

Part 1

The first half of the sessions included questions around participants' work processes, with the objective of trying to identify various associated news media research tasks that would be most relevant and useful to accomplishing larger associated user goals related to funding and content creation. For the individual interviews, we first probed each participant's work and organization's goals broadly, and then narrowed in on ways participants currently did any kinds news media research, or might do more if they had tools to make it easier.

In the workshop, we collaboratively created a journey map of the media makers' overall process of creating documentaries, while discussing challenges both broadly and related to news media research along the way.

Figure 1, panoramic image of documentary makers' journey map; larger image in Appendix 1, Image Gallery

In the case of the workshop participants, we began with suggestions of tasks and considerations on yellow stickie-notes, and added pink stickie-notes to write participants' articulations of tasks and considerations. We then asked the group to place red dots on items that were of particular importance to them.

Part 2

After the intial information-gathering in Part 1, we could better understand the participant's potential use cases for Media Cloud and personalize Part 2 to explore those use cases.
But first, we introduced Media Cloud in two ways to roughly mimic possible first encounters with the product as closely as possible:

A) gathering first impressions of the current tool landing pages, incorporating a think-aloud protocol (asking participants to speak aloud what they were thinking as they browsed the landing pages); and

B) exposing participants to new introductory content orally which might be incorporated into guides or demos, to gather further reactions

In the workshop format, after we gave participants a chance to make comments and ask questions aloud as well as write them on index cards, we also gave participants the option to match screenshot images of Media Cloud to parts of the documentary journey map that seemed most relevant to the functions depicted.

In the case of individual interviews, we made sure to incorporate into the Media Cloud demo topics that seemed relevant to each participant. In the case of the workshop, we explored the topic of artificial intelligence.

NOTE: Participants were not asked to attempt to perform tasks in Media Cloud on their own in either part of the session. We will ask them to do so in the testing phase, when a draft of new documentation to assist them will be provided.

Discovery: Participants

Interviewees

Below are listed the funders and media makers we interviewed individually (in order of the interview schedule):

	Primary role	Organization or Bio
Andrew Catauro	Funder	Ford Foundation (JustFilms)
Matt Higbee	Funder	Community Foundation for Greater New Haven
Rebecca Noricks/ Kathy Reincke	Funder	W.K. Kellogg Foundation
Laura Young	Funder	MacArthur Foundation
Jessica Clark	Funder	Media Impact Funders
Pam Johnston/ Katherine Griwert	Media Maker/ Funder	Frontline
Erin McGoff	Media Maker	http://www.erinmcgoff.com
Judy Kibinge	Funder/ Media Maker	http://www.mydocubox.org
Sandra Rodriguez	Media Maker	http://opendoclab.mit.edu/Sandra-rodriguez
Jessica Sue Burstein	Media Maker	http://jessicasueburstein.com/
Scarlett Shepard	Media Maker/ Film Festival Director/ Grantwriter	http://wfilm.org/aboutus/

NOTE: Though most participants fit the "novice user" categorization, Laura Young should be considered a mid-level user due to her Media Cloud and other data analytic tool experience. Jessica Clark should be considered an expert level user because of her research experience.

Workshop attendees

The following table lists the documentary media makers and researchers affiliated with MIT's Open Doc Lab who attended the workshop:

	Bio
Anandana Kapur	http://opendoclab.mit.edu/anandana-kapur-fellow-2017-2018
Carles Sora	http://opendoclab.mit.edu/carles-sora-fellow
Sandra Rodriguez	(see Interviews, above)
Sarah Wolozin	http://opendoclab.mit.edu/sarah-wolozin-director1
Sultan Sharrief	http://opendoclab.mit.edu/sultan-sharrief-researcher
Josephina Buschmann	https://cmsw.mit.edu/profile/josefina-buschmann/
Sara Rafskky	http://opendoclab.mit.edu/sara-rafsky-research-assistant
Eliza Capai	http://opendoclab.mit.edu/eliza-capai
Danny Goldfield	http://opendoclab.mit.edu/danny-goldfield-fellow-2017-2018
Shirin Anlen	http://opendoclab.mit.edu/shirin-anlen-fellow-2017-2018
Rashin Fahandej	http://opendoclab.mit.edu/rashin-fahandej
Andrew Demirijan	http://opendoclab.mit.edu/andrew-demirjian
William Urichhio	http://opendoclab.mit.edu/team
Marja Roholl	(researcher hired by documentary media makers)
Cindy Sherman Bishop	http://opendoclab.mit.edu/cindy-sherman (also Media Cloud Front End Developer, gave demo)

Survey respondents

The survey was distributed through the Media Cloud listserv, as well as Media Cloud and Purple States' local professional networks. It drew answers from 30 respondents, of which 7 were anonymous. Only 6 self-identified as primarily funders, 8 identified as "other" (strategists, researchers, professors, artist support/ development professionals, and related media roles such as audio producers), and 16 identified as documentary media makers. In addition to Andrew Catauro, Rebecca Noricks, Judy Kibinge, Scarlett Shepard, Jessica Clark, Jessica Sue Burstein, Matt Higbee, Erin McGoff, Sandra Rodriguez, William Uricchio, and Andrew Demirjian mentioned above as participants also in interviews and/ or the workshop, survey respondents included:

Josh Davis – http://www.joshdavis.org/category/documentary/
Heidi Boisvert - http://opendoclab.mit.edu/heidi-boisvert
Patrick Johnson - https://wheatoncollege.edu/news/patrick-johnson/
Marje Etheridge - https://www.backsack.org
Kamal Sinclair - https://www.linkedin.com/in/kamalsinclair/
Mika Kanaya - TV Producer in Tokyo
Mayra Linares - http://cmsimpact.org/team/mayra-linares/
Dr. James Lozada - Northwestern University – https://urldefense.proofpoint.com/v2/url?u=https-3A__casejournals.com_medical-2Dadvisors&d=DwMFaQ&c=yHlS04HhBraes5BQ9ueu5zKhE7rtNXt_d012z2PA6ws&r=RKGp0CqJIVf0Otz
Nat Bouman - SUNY Oneonta https://suny.oneonta.edu/communication-media/faculty-staff
Miguel Castro - Bill and Melinda Gates Foundation https://www.linkedin.com/in/castromiguel/
Meg Stalcup http://www.cammac.space/
(No name provided) – http://www.odyssey-impact.org/

Discovery: Detailed Findings

Target users' work processes and news media research

Overview of priorities, needs, and assessment of use cases for Media Cloud

- A key overall finding about documentary media makers' process was that it was **collaborative and iterative**. Research is often done by a team, and there is often much revisiting to a topic choice, subtopics, treatment, and angles throughout the creation of a project. Also, media makers research distribution as well as funding upfront. **Securing funds, collaborations with distributors, and audience targeting** all were top of mind concerns.

- A key finding about funders' work processes was that they always kept the **reputation and public awareness** of their organizations foremost in their minds. They reviewed their funded projects iteratively too, to track how they fit into their mission as public discussions evolved, especially as related to grantees' work and public statements.

- Impact assessment was important to everyone, but definitions varied greatly, and likely to be seen as **complex,** requiring **collaborative** efforts and even requiring further funding.

How often do media makers and funders conduct online news research now?

Through both the survey and interviews, we found that while documentary media makers indicated that they currently engaged in online news media research slightly more than funders, they were less likely to have used any kind of news data analysis tool.

How much online news media research do you do now as part of your work?
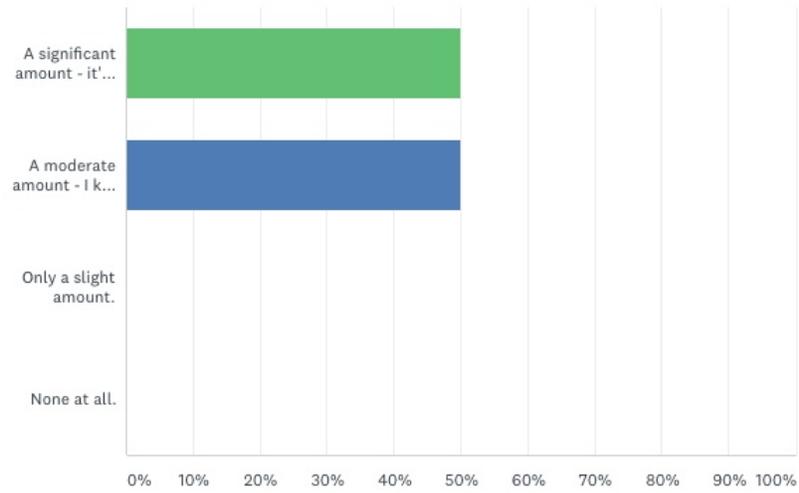
Answered: 16   Skipped: 0

Figure 2: Survey responses from documentary media makers: how much online news media research they do

Q2 How much online news media research do you do now as part of your work?

Answered: 6   Skipped: 0
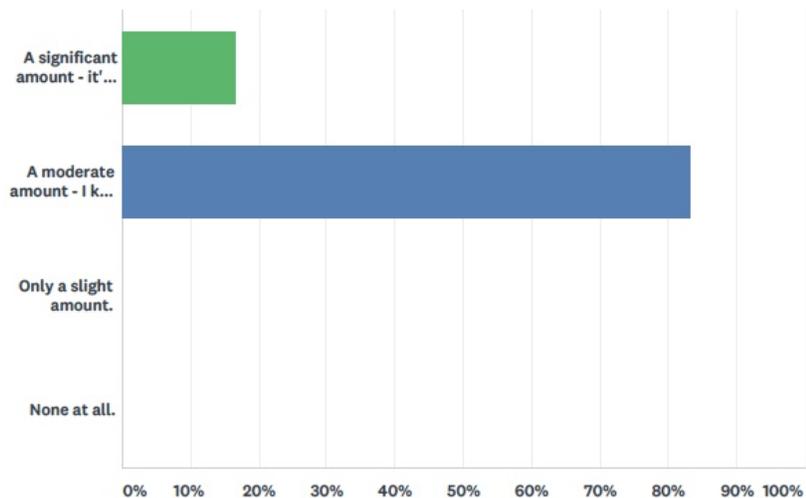
Figure 3, Survey responses from funders: answers to how much online news media research they do

Which tools do you use for your online news media research? (Select all that apply.)

Answered: 16   Skipped: 0
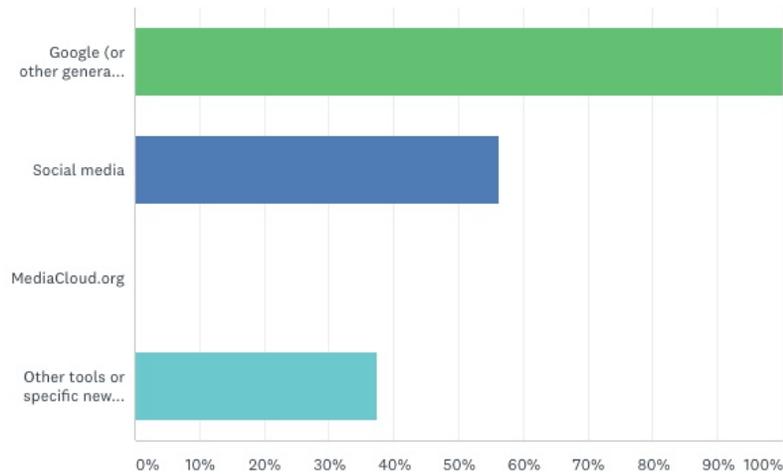
Figure 4, Survey responses from documentary media makers: answers to which tools they use

Q3 Which tools do you use for your online news media research? (Select all that apply.)

Answered: 6   Skipped: 0

Figure 5, Survey responses from funders: answers to which tools they use

While media makers indicated they were involved in news media research more than funders, via our survey, they also were more likely to say they were overwhelmed at the depth of news media research functionality they saw in Media Cloud, or that online research in general was

tiring, that they didn't want to keep "having to click." In this respect, it's not surprising that they were less likely to have used a data analytics tool.

In the "Other" category of tools in the survey, documentary media makers specifically listed:
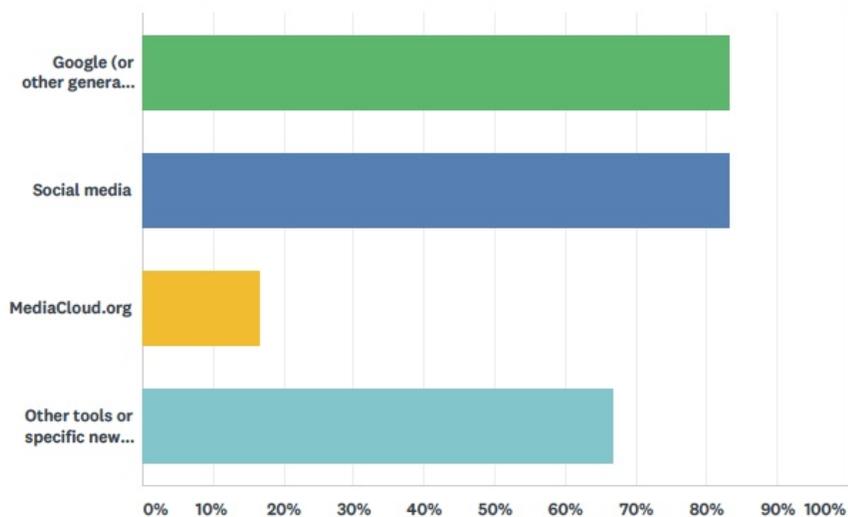
- YouTube
- Newsletters and links found through them
- Newspapers.com
- Nikkei Telecom
- Personal compilation of bookmarked sites which I check nearly daily
- Twitter

In the "Other" category of tools in the survey, funders specifically listed:

- Knight foundation
- Meltwater
- Subscribed to various newsletters
- Analytics firms, such as Alto Analytics, centers such as the Digital Methods Initiative

In the interviews, participants mentioned Google alerts as a commonly-used tool to track online news media. Other related tools mentioned included:

- Google analytics (weekly) – also Facebook, Twitter, other platform analytics
- NatGeo
- Archives
- Issue Lab
- Tableau
- Highcharts
- Harmony Institute – Media Navigator
- Salesforce
- Crowdtangle
- Simply Measured
- Sprinkler
- Lexis Nexis
- Crimson Hexagon
- Paid services
- PR clipping services

Frontline felt that no tool was as good as their in-house data analyst, and that in many tools, "sentiment" dominated functionality, even though sentiment around documentaries will often be necessarily negative, due to the weighty subject matter.

Following are the specific tasks that, after discussion about participants' general work flows and priorities as well as news media research, were agreed upon as being likely use cases for a tool like Media Cloud.

Funders

When probed, funders expressed some interest in using Media Cloud on the front end of their general process of grant-making (grant establishment, outreach, evaluation) as well as during the development of a project that has been funded, but their primary interest currently seemed to be tracking communications around the topics, grantees, and projects funded, both to help measure impact as well as support general communications efforts and PR/ crisis management.

- ***Grant establishment, outreach, and application evaluation****.* There was some interest from funders in "checking [their] own biases," making sure that underrepresented voices were heard, and they weren't missing topics that needed to be covered. Funders reported engaging in projects they might not have otherwise if they weren't shown the correlation between two topics in the media (such as children's issues and incarceration/ re-entry). Others said they had some trouble finding media makers covering topics in which they had active interest (disability rights was an example) and might benefit from further research to find storytellers in these areas.

- ***Evaluating updates from grantees on work****.* Some funders mentioned that media makers are often asked to provide updates throughout the development of their projects, as treatment changes, based on recent events or interviews, were not unusual. In this context, Media Cloud could be a helpful tool to facilitate a discussion around public perception or media/ event tracking. As an aside, one funder mentioned that they may decide to take their logo off a project that no longer fits their mission, but they never back out of a grant.

- ***PR + crisis management.*** During the Media Cloud demo, one of the first tasks several funders suggested was to simply search on the name of their organization to track public perceptions and conversations. They also mentioned needing to be prepared in case an issue arose in the media that could compromise perceptions of the organization or any of the grantees efforts. One participant had used Media Cloud in conjunction with a funded program (not a documentary project), and mentioned feeling like she only had grasp on about 50% of Media Cloud's functionality. But she also described a scenario of being "head down in Media Cloud for about a week," monitoring conversation and grantees' responses to the "fire and fury" controversy introduced by Donald Trump. She felt she was able to assess and "offset some of the commentary coming out of the White House" that she felt was in conflict with her foundation's program.

- ***Internal communications.*** Several funders were interested in a task flow that took them directly from analyzing and researching online news media to creating newsletters or other media to share. They mentioned that some tools they used offered this functionality. The participant who used Media Cloud shared a use case for sharing articles around topics in which her foundation was interested, though none of Media Cloud's data visualizations.

- ***Impact assessment.*** While impact assessment of a documentary was definitely of interest to funders, many considered this effort to be a large enough process to engage consultants, including subject matter experts and professional evaluators who use their own tools. Jessica Clark of Media Impact Funders mentioned that issue-based funders (rather than funders of documentaries, specifically) are much more likely to be hands-on and demanding in terms of evaluating impact. One funder shared some impact success stories that seemed related to language-related functions of Media Cloud, such as introducing new lexicons into public discourse, including "racial healing" and "dental therapy"—phrases that had not been used prior to related programs they had created. One funder referenced an online impact guide (impactguide.org) created just for documentary media makers, which mentioned Media Cloud, but also expressed some disappointment that media makers were not using it more in their work. This funder also alluded to the complexity of evaluating impact for smaller efforts, when he said that it's easier to assess conversations around a film like *Food, Inc.* than topics like policing quotes or policies.

> "The latter is challenging because it's more than counting the number of tweets mentioning 'quota,' 'crime,' or 'punishment,' or counting views of that film."
>
> – Documentary Media Funder

Media makers

As previously mentioned, media makers reported being more proactive about online news media research than did funders, yet showed relatively low usage of data analytic tools in their work. One commented that documentarians were naturally oriented more toward the characters' perspectives than news media's. Film is a medium of emotions—and we can assume that the art of emotional storytelling is a primary focus for media makers—which contrasts with the very analytical nature of Media Cloud. However, media makers did see value in a wide range of tasks for which Media Cloud could be of use—funding in particular, but also

audience targeting, getting past "the hype" in the media, and finding underrepresented voices and perspectives to feature. In fact, in our journey mapping exercise, media makers mentioned that "what's hot" was something actually viewed negatively by them, and wanted to know how Media Cloud could help them get outside the filter bubble.
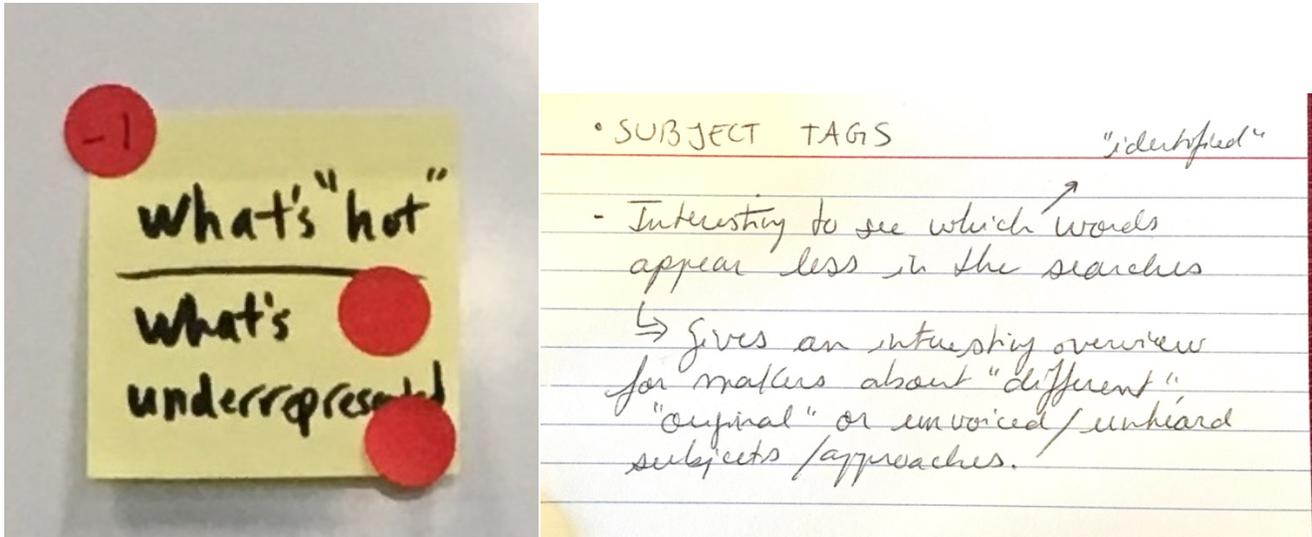
Figure 7: Media Makers labeled the red dot next to "what's hot" with a "-1" for something to avoid, and expressed interest in words that appeared less in Media Cloud outputs.

Media makers also pointed out that creating a production is a very collaborative effort, and that those with bigger budgets would hire a research team to manage most research, and producers to interact with funders. Those with smaller budgets had to assume more responsibility, and therefore looked to Media Cloud to provide the most value with the least effort in the research realm.

Below are general categories of tasks for which media makers agreed Media Cloud might be useful:

- **Story idea formation + evolution** – especially in terms of subtopics, themes, and perception by funders and distributors. Media makers agreed with funders that checking their own biases as story concepts were chosen and developed was a good idea, to make sure voices represented were fair and diverse.

- **Funding** – using data visualizations of the media landscape, or other learnings from Media Cloud, in grant applications to make their case for a story, and identifying those who would be most likely to fund or distribute their projects.

- **Identifying and monitoring context** – assessing the current media landscape around a topic was seen as a helpful part of a planning strategy for a documentary, even when content was planned to be largely historical:

"I need to figure out how to birth my story into this [current] context."
- Jessica Sue Burstein, Media Maker

Other media makers were interested in who owned the most influential conversations around certain topics, and seeing the language that was resonating. In addition to the story implications, media makers felt Media Cloud could help them identify who to reach out to for various types of partnerships, marketing, and story contributions.

- **Pre-production/ production research** – Online news media research was seen as particularly critical for fast-changing topics such as technology, but also to find subjects on the ground. One misperception of Media Cloud by more than one respondent was that it gave access to a longer time range of media and could be used for historical research. However, even without this capability, media makers agreed it could still be used to identify artifacts to feature in their medium of visual storytelling. As previously mentioned, media makers were especially interested in any ways tools like Media Cloud could help them identify underrepresented angles and voices—these often comprise the core of their stories. However, at first glance, Media Cloud seems to point to more of the opposite: the voices and narratives that bubble to the top, so care should be taken to address this strategic use of the tool.

- **Audience research** – Some media makers mentioned using Media Cloud to research and defend their audience targeting choices by examining trends and topics of particular sources. Defining audience and community for a particular documentary was mentioned as a key aspect of their process, and was also often evolving.

- **Impact assessment** – Like funders, media makers were interested in evaluating impact, but also expressed diverse views on this subject and questions that inferred the complexity of impact, such as the one written below at the workshop:
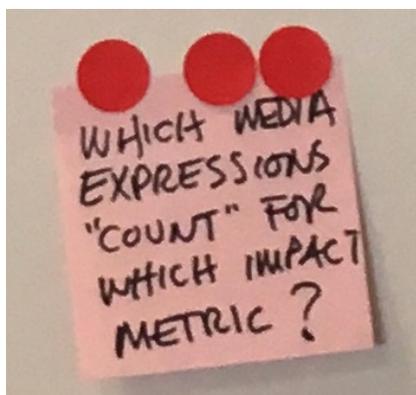
Figure 8: Question posed by a documentary media maker at our workshop that received three votes of importance as a consideration in their work.

Pam Johnston at Frontline saw "evolving conversations" as a basic result of what they do and the nature of their journalism; it wasn't something they'd mention as their work's impact publicly, though internally there might be interest in tracking new discourse that arose as a result of their work, if these could be properly correlated. In their view, however, impact would only be publicly communicated in relation to a person or event; for example, the CDC requesting Frontline films about Ebola that were produced prior to the time the crisis came to a peak to send to healthcare workers around the world. Media makers also included events that occurred in the lives of their subjects as a result of a film's release as part of their definition of "impact." One media maker suggested that Media Cloud could help reveal where a film is discussed most, and identify emerging trends in these regions or groups that might correlate.

Media source types and social media sharing

Our survey had respondents rank the importance of news coverage by regional type (local, national, international) and types of social media shares/ discussions on both topics respondents care about and specific media created by them.

Responses were fairly evenly spread across the options, but Reddit was assigned the least amount of importance in terms of social media discussions, and national news carried the most weight, overall, by a small margin.

During the interviews, we probed participants' perceptions of the value of digital-only sources. We found that these were sometimes seen as an advantage, and at other times a disadvantage, as some funders mentioned these sources would not resonate with their boards, so they'd rather they were left out. Even of the participants who saw digital-only sources as an advantage, some expressed uncertainty as to the specific nature of the sources and wanted to see more details on them.

Throughout the interviews, it was obvious that Media Cloud was seen as primarily a tool for looking at lots of data at once; it was less obvious that it could be used to narrow research on single source, but doing so had value for some participants.

Discovery: Media Cloud impressions

Though this portion of our study was not meant to be a usability test of the Media Cloud user interface, we did test participants' initial reactions to the Media Cloud main tool landing pages (Explorer, Topics, and Sources) for two reasons:

1) we might talk to the same participants again in the testing phase, in which case we will no longer be able to get initial impressions; and
2) these pages are critical to engaging users, whether they view an online guide/ demo or not.

Time and space for participant questions and reactions to the demo questions in these sessions were limited, yet the demo required a fair amount of detail to elicit a realistic reaction. We employed a strategy of:

- relaying the higher purpose or vision of Media Cloud first,

- then getting first impressions of the tool landing pages,

- then exposing participants to introductory content that broke down the three main tools, explained sources more in-depth, and summarized the various ways Media Cloud added greater value over Googling (a key question in many participants' minds we discuss later in this report).

Key reactions from participants are below.

Tool landing pages

- **Not all screen elements were intuitive**. Many respondents didn't know what certain prominent elements on the screen represented—sample searches, topics, geographic maps. There was an expectation for better organization and filtering of these and other elements (such as sources and topics), and better explanation of details such as date ranges and topic authors.

- **Some participants liked seeing a long list of topics and saved searches, but others were confused by them.** Many participants weren't interested in

content not related to their subject of interest, whether they were viewing the sample search graphics, topics, or collections. And there was discomfort and confusion around whether others would view their own saved topics.

"Again, why am I being shown these stories? What is the rationale for what's being presented here? Are these the hot topics of the moment?"
            - Funder and Communications Manager

"This makes me wonder if others would see the topic I create. I'm not sure I'd like that."
            - Scarlett Shepard, Media Maker

- **There was confusion around certain terminology**, such "collections"—some participants wondered if these were topics or geographies. "Sources" seemed to be the clearest as a concept, but some confused authors of topics with "sources."

- **Being able to "star" or save things was seen as positive**, and sometimes led to questions about collaborative use.

- **Jargon or vague expressions were received with confusion.** Many commented that they didn't understand "active crawled media." Even our experienced research participant (Jessica Clark) didn't know what a "bigram" was.

- **Sometimes when participants said they were impressed with a visualization, they were misinterpreting it.** For example, most participants reacted positively to the visualization associated with "identifying how an issue is talked about," but one participant leapt to the conclusion that the graphic was representing "who was doing the talking." This is one of several examples we witnessed of a participant seeing something that they said was impressive, but misinterpreting it at the same time.

- **If collections listed on the Sources page happened to resonate, participants were impressed. But most generally wanted more information on sources**: which exact sources did Media Cloud have? How far back did they go, and in which languages? Which belong to which collections? There was an expectation from some that large and popular sources should be

listed, or possibly featured. For participants who understood collections as groups, they wanted to understand the logic of groupings and more detail around the sources that collections contained.

- **As is usual with digital media, participants scanned the page, and didn't read fine print.** Some complained about some print being too small to read (word clouds, print in graphics).

- **There was a positive response to "big numbers" and certain phrases, but these usually led to further questions**: for example, were the 500 million stories accessible all at once? "Track attention over time" was always received well, as was the concept of "influential sources and stories." But participants immediately wanted to know how Media Cloud determined influence.

- **While some participants (ones more advanced in data analysis) said they gravitated toward word clouds, others said they just "didn't like them."** This is of note just as a reminder that some users who are interested in Media Cloud are either novice enough in terms of digital technology comfort, or just not comfortable with popular visualization formats, to struggle cognitively even with elements that many who use computers frequently find commonplace.

Demo reactions and conclusions

As a reminder, this part of the study aimed to explore usefulness and first impressions of Media Cloud; we didn't test for usability. Participants had mixed reactions around *perceived* usability, with some participants saying "it looks easy enough to use," while others said it looking "a bit overwhelming," and commented that their "visual orientation" didn't lend itself to grasping tools like Media Cloud easily. On this point, it's important to note that no participant actually performed a task as part of this study—the only valid test around gauging successful performance and the required usability and learnability we are trying to increase.

Below are key reactions to the demo of Media Cloud and final conclusions from interview participants:

- **Many participants didn't remember that we told them that Media Cloud was free and open-source, and even if they did, they had questions about funding.** Most people concluded with commenting on how great it was that Media Cloud was free, even if it wasn't as "shiny" as a consumer or enterprise tool. There were some questions around where the funding for Media Cloud came from.

- **Perceived breadth and depth was both a positive and a negative.** Participants were impressed by the number of sources and stories it tracked, but at the same time, felt overwhelmed or unsure where to start or how to align it to their needs.

"The breadth of news outlet coverage centralized in one place [is most compelling]."
- Funder and Communications Manager

"[Before continuing with Media Cloud] I would want to know how to make a good query that is useful in demonstrating impact or putting a report together. There's so much of it—how do we take the nugget that will be important to translate to our leadership of the value of this query? Trying to zero in on what the useful thing is in the tool for the type of impact we want to make is most important."
- Funder and Communications Manager

- **There was some uncertainty around who should take the lead in using Media Cloud for a documentary project—funder or media maker.** One funder who worked with media makers preferred that the media makers take the main responsibility for learning how to use it, but wasn't sure how to help them do so.

"The fact that the impact field guide points to Media Cloud as a way to accomplish this particular task… assessing impact on a film… if it's there and filmmakers are aware of it, but they're not using it, I'm wondering is it because they need a case study? I think it's because this sort of comprehensive, scientific analysis of discourse is a step beyond where they're thinking. They're thinking about what

needs to be in the film, and how are my reviews going to get written, what will people take away from the film… not necessarily how will the ideas from the film be brought to people who haven't necessarily seen it. [But it's] something we care a lot about, and use as a criterion in deciding what films we want to fund."

<div align="right">- Documentary Media Funder</div>

- **Identifying the most influential coverage within a topic and the language used around it was seen as being useful.** But there was some confusion around how Media Cloud is best used to assess influence.

"I like the idea of knowing who owns the most influential coverage within a topic from the audience side, and the language they use, and it might be useful [in identifying] a strategic media partner to amplify our content."

<div align="right">- Katherine Griwert, Frontline</div>

- **Some of the most enthusiastic reactions to how Media Cloud could be used by funders came from Judy Kibinge and her colleague, Josh, in Nairobi, Kenya, where she described films as very practical tools for fighting extremism locally and nationally, as well as for increasing international awareness.** Judy saw outputs of Media Cloud as potentially even affecting the language used in film scripts, as well as the topics identified for funding of grants. However, availability of necessary bandwidth to use Media Cloud was a concern, too.

- **Participants named quick and integrated task-flows, convenience features, as well as other monetary measures as suggestions for increasing value.**

"If there's a way when you're reading the articles, to highlight key words and save that... then I could go back and get a list of everything I highlighted to search, so I wouldn't have to write it down. Also, even if you had to pay for it, if I were a member of Media Cloud it would be amazing to get access to articles you couldn't otherwise without a subscription... all these subscriptions [are overwhelming and costly]."

- Jessica Sue Burstein, Media Maker

- **Most participants would investigate sources further before getting started, and liked being able to "curate" their own sources or collections.**

- **There was a common association of Media Cloud with participants' use of Google alerts, even before we mentioned the Google comparison.**

"You read my mind! How is this different from Google? Google alerts were the first thing I thought of."

- Scarlett Shepard, Media Maker

- **One participant who had been exposed to Media Cloud at the workshop and through an individual interview was able to identify three main advantages:** Identifying subtopics, themes, angles; breaking down the "hype" in the media around a topic; and tracking emerging trends and conversations in groups/ regions where her released film is also mentioned, as a way of measuring impact.

- **Media makers understood the value of Media Cloud in a grant application process.** One participant mentioned that she could understand that funders would "want to see the numbers."

- **There was some confusion about how and when Explorer should be used versus Topic Mapper.**

"The Topics and Sources page I understand… the Explorer page, I'm kind of intimidated… what am I supposed to do with it? I'm assuming people who are going to come to Media Cloud with a specific mission in mind, I would go there thinking, I'm going to research how many millennials watch HBO docs each week. So I would go to the Topics page for that. I guess distinguishing between the Explorer page and the Topics page more to show how they're different [would be helpful]."

- Erin McGoff, Media Maker

- **Our expert research participant offered the following comments:**

Greatest advantages:

- Results not influenced by biased search engine ranking algorithms
- CSV download; can't do that with Google
- In the genre of the kinds of tools she likes to use: nonprofit public interest—she would be more likely to use this than one that costs money because of philosophical reasons

Uncertainty about sources:

- Consistency issues—if sources grow through different users' interest in different topics, there could be an unequal distribution
- Length of time it takes to crawl so many sources
- Questions about whether sources remain after a user adds them in

Other hesitations and suggestions:

- Awareness that media is only one data source across which to track impact.

- Moving targets in terms of digital sources and social media: blog inclusion and Facebook sharing makes it more attractive, but it's difficult to say where conversations are going to happen the most next (YouTube, Instagram). Using Media Cloud it in tandem with other tools, such as Twitter analysis tools, Social bro, Sprout might be best.
- It's not a flashy tool compared to some other things out there, which might bother people; they might want something a little shinier.
- Expected to see a network map visualization; should promote that more prominently.

Discovery: Summary of key findings and recommendations

This section of the report synthesizes the patterns of key findings discovered through the research we've completed, couple with recommendations on moving forward with new instructional documentation, as well as user interface/ feature considerations for the future.

What compels these potential users most? How can we most effectively engage them, and help them see the usefulness of Media Cloud in their work upfront?

- **The most compelling motivators seemed to be funding (for media makers) and reputation (for funders), followed by seeking out diverse perspectives and underrepresented voices.** Thinking in these practical terms (money and risk) as well as through a mission-driven lens can help us focus on what's most engaging in the instruction.

- **Frame the learning challenge in terms of how quickly we can get users to payoffs that will build their confidence and curiosity to continue learning and exploring.** Small wins in short timeframes build confidence toward bigger wins. Media Cloud outputs aren't always immediately impressive ("what do these words have to do with opioids and heroin addiction?" asked one user), so consideration of tactics to both get to significant outputs and recognize them will be key challenges. Users could benefit from strategies and properly set expectations around trying different tactics. Successful use of Media Cloud appears to be somewhat principle-based, and principle-based instruction can be challenging. We should remember that helping users formulate questions that Media Cloud can help answer is also a key component of success.

- **Words like "influence" and large numbers often engage people,** but immediately beg for definitions and more details. Consider quick ways through messaging to address common questions around these large promises.

- **Concisely communicate Media Cloud's higher vision and open-source/ free to use model.** The original purpose behind the tool resonates with these users and helps to set context, and the free use model is also an incentive to these budget-conscious users.

- **Discuss advantages of Media Cloud over using a big search engine like Google upfront as well.** The specifics in a comparison with Google can help provide the incentive and patience to learn Media Cloud.

- **Discuss relationships with key players, whether Facebook, Crimson Hexagon, or network maps.** A less critical point, but discussing partnerships that help users achieve a broader analysis might be helpful to know under features/ benefits upfront as well.

What are some common questions these potential users need answered before deciding to use Media Cloud, or to feel confident in getting started?

- **The breadth and depth of Media Cloud are both a strength and weakness.** Depths can feel murky if not detailed well, but empowering when they are. Breaking down functionality helps; relating functions to higher goals or use cases helps even more.

- **Sources: discuss these early on, and comprehensively**. Despite trying to summarize sources proactively in our introduction, almost all participants had more questions about sources, wanting more specifics: what's there, what's not, what's "being mixed in," wanting to exclude certain ones as much as include, why some were "featured" or default choices. One user wondered aloud if there were different default sources for different topics.

- **Be clear about the positioning of Media Cloud.** Good positioning statements and messaging clearly convey what a tool/ product is best for, and imply when not to use it as well. For example, Media Cloud isn't a historical research tool, and even between Explorer and Topic Mapper there are choices to be made around higher goals for the research. The rather general nature of the name, "Media Cloud," can imply a one-stop shop for all news media research; we should position it more along the lines of a gauging current and recent media conversations.

In which ways do these potential users work that might affect tool usage?

- **Media Cloud research is likely to be explored through a collaborative lens.** Both user types (media makers and funders) think about sharing research with one another, and who should be doing which parts of it. Both admitted that they should and could be doing more research. Media makers in particular work in a collaborative style with a team, never alone.

What were the most common areas of confusion?

- **There are some problems with vagueness, jargon, and inconsistency in language.** Sources, collections, media outlets, and topics are all rather vague terms and should be defined, as well as phrases like "how a topic is talked about." While vagueness was a greater problem in the language used in general, but we should also define any jargon used. There may have been an inadvertent renaming of tools via the most recent user interface (UI) designs (Topic Mapper now "Topics," Source Manager now "Sources"), which causes problems with directing users to the correct areas of the UI; we should resolve these as well as establish guidelines for use of "Media Cloud" (one word or two). Finally, don't forget people scan a page much more than they read, and strategic use of language in headers and through bullet points helps them parse text in an application interface or landing page better.

- **The distinction between Explorer and Topics/ Topic Mapper.** While Media Cloud might benefit most from an exploration of how the two tools could possibly be more closely integrated in the interface, at the very least, firm recommendations, possibly a compare/ contrast matrix and rationale for choosing one over the other should be stated—including the time it takes to complete a task (practically-speaking, a two-day turn-around for topics may not work for those in a rush). However, as stated above by one participant, Explorer is not necessarily seen as easier, even if the limited results a user gets come more quickly.

What were the most commonly suggested or expected features, for future consideration?

- **More than half of participants mentioned using alerts and implied an expectation to see alert functionality**. Media Cloud could benefit from automation (whether programmatically or through curation) around notable findings within topic areas that users are interested in and want to be kept updated on. I've suggested employing a common news taxonomy under which to organize these top-level findings. If increasing Media Cloud engagement with the nonprofit and social impact community is a goal, this is one feature area that might help.

- **Consider other kinds of value to resource-constrained media makers who might be overwhelmed by online media research, yet blocked from accessing articles they need that are behind paywalls.** Are there ways we can help improve actual task flows of a researcher who is tracking many topics and details in conjunction with a team and sharing outputs in newsletters, grants, reports and web sites? Are there other media partnership revenue models that could serve both the user and Media Cloud?

Design, Testing, and Delivery: Overview

After reviewing the Discovery findings, the Media Cloud team decided on a strategy of creating a new *Getting Started* guide that incorporated some documentary media making and funding examples, while still introducing Media Cloud, with a focus on Explorer, to all kinds of potential new users. The rationale was three-fold: users really need to understand basic steps of using Media Cloud regardless of their use cases, Media Cloud's documentation was a bit scattered throughout multiple guides, and this guide could help many different types of users beyond content creators.

The team also identified future content (that could be in the form of a guide or just web site content) to address documentary media making and funding use cases in more depth, possibly as a part of a content creator's guide, or a "Check Your Biases" guide. Checking one's own biases on topics and viewpoints was something that was suggested by some Discovery research participants as a use case for Media Cloud, and resonated with participants in general.

The remainder of this report will focus on the testing and refinement of the guide that was completed with the input of media maker and funder participants in a second round of research.

A revised *Getting Started* guide and accompanying instructional strategy document will be provided separately. The instructional strategy document will include basic guidelines on how to transform some of the guide's instructional content into an online help system, though it's recommended that the guide be provided as a downloadable document as well.

Design, Testing, and Delivery: Methodology

We recruited participants to test the *Getting Started* guide for usability, and test the learning experience of Media Cloud as a whole. Participants included:

	Primary role	Organization/Bio
Mika Kanaya	Documentary Television Producer in Japan (MIT Visiting Scientist)	https://www.linkedin.com/in/mika-kanaya-72a71848/
Liz Manashil	Manager, Creative Distribution Initiative	Sundance Institute/ https://www.linkedin.com/in/liz-manashil-2861a613/
Jess Fuselier	Manager, Education and Research, Creative Producing Initiative	Sundance Institute/ https://www.linkedin.com/in/jessfuse/
Meredith Duff	Filmmaker Outreach Coordinator/ Funder	Cinereach/ http://cinereach.org/about-us/
Rebecca Noricks	Funder	W.K. Kellogg Foundation
Cynthia Farrar	Founder, CEO, and Executive Producer	Purple States/ http://purplestates.tv/team
Hajnal Molnar-Szakacs	Film Fund Director, Documentary Program	Sundance Institute/ http://www.sundance.org/programs/documentary-film

Participants varied in their familiarity and comfort with technology and data analytics tools, from the self-described "non-analytical" participant, to one who had several years of coding experience and was helping to create a data analytics program at Sundance.

Research protocol

Because of the amount of introductory content in the guide that isn't task-related, and the time needed for participants to brainstorm data points around a topic of interest to them, we asked participants work through the first half of the guide on their own ahead of the test session, recording their thoughts in a "diary-like" format, as comments, in the guide's Word document. Participants also completed a Google Doc worksheet, which captured possible data points on their topic of interest, and shared their worksheets with us.

We began our test sessions by discussing with participants their work and needs as they may relate to various uses of Media Cloud. We then asked them to clarify or elaborate on select comments they wrote are they read the guide. For the remainder of the session, we had participants read the text of the guide they hadn't reviewed yet aloud, and speak their own thoughts as they worked through tasks. We shared our own screens of the Explorer interface, and prompted participants to tell us what they'd like to click, mouse over, or type.

Because of a one-week hiatus between the first usability test (with Mika Kanaya, who had some prior Media Cloud experience) and subsequent tests, we were able to refine the guide based on Mika's feedback for the remaining user sessions. For this reason, two versions of the guide were tested: an early draft, and a refined draft.

Two participants (Liz and Meredith) did not finish reviewing and commenting on the entire guide; they got through the first half on their own, but we did not complete a full review of the material with them. One participant (Jess, who has coding and data analytics experience) reviewed the entire guide on her own but did not submit any comments beyond those we were able to elicit from her during our test session. Reasons for incompletion varied widely: Meredith found the material challenging and time-consuming; Liz felt Media Cloud was not a tool for which she could find great use in her work, which is focused primarily on distribution; and Jess felt the guide was satisfactory and had few suggestions to make.

The next section details the findings of our tests of both drafts, along with recommendations for revisions.

Design, Testing, and Delivery: Findings and Revisions

Early draft findings

A unique finding from our test session of the early draft was that our participant struggled with locating and evaluating the right sources for her needs; in fact, she had trouble moving past this section in her task flow. This part of the process in Media Cloud is challenging in many aspects if a user is to do source evaluation in-depth, and the instructional documentation needed to support the user better through more procedural cues and screenshots. We made these changes to the draft for subsequent testing.

The remainder of the findings from the test of the early draft are incorporated in the next section.

Overall findings and revisions (or suggestions)

Introduction and product concept

Most participants found the guide's introduction and description of the Media Cloud product concept satisfactory, though some wanted more detail about the usefulness to content creators of different types (including film and video producers), while others wanted less content in general, and to move into the procedural information more quickly.

Most participants had at least one question about sources, such as whether Media Cloud included local news. A few participants were confused about if and how Media Cloud could be used to analyze social media.

When participants began to think through potential uses of Media Cloud in their own work, tracking coverage around their organization or their own media usually their first thought. However, participants quickly came to be interested in using Media Cloud to research a topic for a film or video, prior to development, to see how it's already been covered. One participant also cautioned that her organization's view was that news coverage should not dictate art. Another participant commented that press was a key driver in independent film distribution, and distribution efforts could benefit from deeper media analysis to substantiate a case for a film's projected market success.

Several participants said that the main areas of analysis (key values) of Attention, Language, Representation, and Influence were especially helpful to note, though some had some questions (and suggestions) about how Influence is and should be measured, and wanted to

know more about Topic Mapper. Throughout the session, there were some lingering questions and confusion around the distinction between Explorer and Topic Mapper. Representation was a concept that resonated, particularly with participants focused on diversity efforts as part of their work.

The section that compared and contrasted Media Cloud to a major search engine also resonated with users, and everyone wanted more clarification on the point about search engine algorithms not providing as objective results.

- **Recommended revision to guide:** Add a bit more detail on use cases without expanding the introduction too much. (Use a marketing page on the Media Cloud site to explain features, benefits, and use cases for content creators and others in more detail.) Add a reference to local, regional, and national sources. Specify that Media Cloud is not a social media analytics tool.

Worked examples: research question and answer, queries

Most participants remarked on the helpfulness of the research question and answer examples, as well as the worked examples in the worksheet and in the guide's query table.

There was some uncertainty expressed about the conclusions that could be drawn using Media Cloud to some of the research questions provided, however. One participant wondered if the written answers were outputs of the tool. Another questioned how it was possible to measure "gaps," i.e., how do you know what you don't know? Some participants asked for more visuals, such as screenshots of the analyses that led to these conclusions.

All participants felt that forming a research question was helpful. When asked if general searches that are not based around a question would also be helpful, several participants answered no.

"If I have a specific question, I think that helps me, because then I know what I'm looking for…. I really like the idea of forming a question."
- Documentary Funder

However, one participant commented that the depth of data and functionality in Media Cloud made the tool seem very "technical," and asked if there was a way to do "simple searches," for users who don't have time to craft questions.

- **Recommended revision to guide:** Consider integrating screenshots of data visualizations that led to conclusions in question/ answer examples (if not in the guide, then on a marketing-oriented case study page on the site), and consider adding more examples. Consider adding an exercise of creating a saved search on one's organization, to address the "simple search" use case.

Worksheet

Participants thought the research worksheet was helpful, whether they had used Media Cloud before or not. Participants seemed to grasp that the worksheet helped them brainstorm their topic, and think through data points that they would structure into the query and look for in their analysis.

"I thought I was able to do my search without doing this worksheet, but then I started doing this and realized I wasn't really thinking it through. I found a new aspect by doing this…. I thought it was going to be time-consuming to write down the event dates, but after I did it, I realized that my questions are too vague, and I had to narrow down to 1-2 events. Usually I spend more time doing random searches in Media Cloud, but by having all of this information beforehand, it might mean there's less time for me doing the searches and I'd have a more precise question in my mind. The key event dates were important, and by realizing these details, I have a new question or angle that I can dig into."

- Mika Kanaya, Documentary Television Producer

However, there was also some confusion about the brainstorming flow: specifically, if the worksheet was meant to help participants brainstorm data points that lead to a question, or

refine a question one already has in mind? Additionally, some participants neglected to use the data points they had already researched and captured in this worksheet when they structured their query in Explorer (they would Google key event dates, for example, all over again). It did not seem to be quite clear enough how the various data points correspond to inputs or outputs in Media Cloud.

- **Recommended revision to guide:** Incorporate better instruction and labeling on the worksheet rows that correspond to input/ output points in Explorer. Consider instructing users to optionally list an initial question they have in mind, and to use the worksheet to refine it.

Query crafting and refinement

Participants found the table for Boolean terms helpful, and it seemed to help them read through this dense information relatively quickly. Several commented that the examples in the table were especially helpful. Several commented that they had no idea when they would use the wildcard "?"

Most participants struggled with crafting their query, and specifically, translating their research questions into queries. They were able to work through this task, however, with the guide support, and were also able to refine their queries—sometimes with a bit of moderator assistance, but mostly on their own—when their Explorer search returned very little to no results. All participants wanted more in-context tips or "do's and don'ts" for refining their queries based on their results. One participant commented that the most complex query was off-putting, while another found that example very helpful.

Most participants forgot about source collection dates as a major constraint that could affect their results. Also, some participants did not translate their comparative question (the most common type of research question) into a two-query simultaneous search in Explorer.

- **Recommended revision to guide:** Incorporate in-context online help tips of what to look for and try when refining one's query, and possibly a list of common "do's and don'ts." Make the connection between comparative questions and the multiple-query search structure in Explorer clearer. Give reassurance that users will be able to build up to creating more complex queries with practice.

Sources

While participants had questions about sources when being introduced to Media Cloud, none seemed to have the patience for the complex task of sorting through and evaluating sources and collections for their own use. Most participants selected sources based on location only, though some users did indicate interest in special collections, such as partisanship or blog

collections. One user thought she could skip over selecting sources because Media Cloud would, by default, search on everything, and the source selection mechanism was like "an advanced search." Another user struggled with determining the right keywords to search in finding appropriate sources.

Throughout our research, participants from outside the U.S. have commented on the impressive number of sources available from countries around the world and in the variety of languages available.

- **Recommended revision to guide:** Consider UI design revisions to make browsing and evaluating sources easier (see Explorer UI for beginning ideas). We have integrated a link to languages available in a revision of the early draft of the guide.

Vagueness, idioms, and jargon

While most of the text was easily understood by participants, there were some vague terms in the instruction, including terms used in the interface that may need to be defined repeatedly, such as "sources." The response to technical terms such as "API," meant mainly for developers, was anticipated, and may be best removed from this beginner's document, if the corresponding points aren't critical. Additionally, non-native English speakers didn't understand a few informal expressions or idioms.

- **Revision:** Add a glossary of terms or highlight terms to learn in a sidebar, remove terms that aren't critical, remove and replace idioms, and repeat definitions of necessary but potentially vague terminology.

Explorer UI

The following are the high-level findings of users' reactions to the Explorer user interface while performing tasks detailed in the guide. One general finding to note, for all of the Explorer results UI, was that users didn't want to read the guide at this point; they were very focused on the interface and interpreting the visualizations. In-context online help will be especially important for the results sections.

LANDING AND SEARCH QUERY FLOW: The guide did not explain how to structure a query from the landing page at explorer.mediacloud.org, as the default search query box on this page does not provide the full functionality needed for users to answer most research questions. As anticipated, participants were confused about where to find the full query page, and Mika, who used Media Cloud in the past, mentioned that she often looks for the right button or link to lead her to that page.

- **Revision:** The Media Cloud team has suggested, as an interim solution (before UI redesign work), documenting the ability to click the Search button without typing in anything; this takes users to the full query page and searches on "everything."

SOURCES: Though some participants didn't have the patience to fully research sources using Source Manager ahead of their search, the browsing they did finish seemed to help them decide which sources they'd like to select in the Explorer dialog. One user tried searching on an abbreviation for a U.S. state and got no results. We've noted in other informal walk-throughs of searching for sources using this dialog that users sometimes neglect to select the correct filter on the left side of the dialog. It took some participants a bit to understand that sources are the main mechanism with which to limit their media search to specific locations.

- **Suggestion:** Explore an improved browsing experience with a more detailed taxonomy in Source Manager. Highlight how many of the 60,000 available sources (a number that has impressed our participants) a user is searching prominently. Emphasize the relationship between locations and sources in the worksheet better. Redesign the dialog to include a date filter, as few participants remembered that sources have major date collection constraints. In this dialog, also allow users to select a location (country, region, state, and so on) and have Media Cloud auto-suggest *all* collections linked to that location that are not a special interest collection. Allow users to deselect sources from that list. These revisions would not only make the process easier and less error-prone, but would satisfy the expectation that Media Cloud "searches everything [related] by default."

RESULTS – ATTENTION: As previously mentioned, first attempts at a query often resulted in "flat lines" for the Attention category. Also, clicking on a point in the peak graph did not load additional results for our users, which appears to have been a bug. All users had questions about the Sample Stories—they wanted to know more about the sampling methods, and why some stories seemed quite inappropriate for their query. It wasn't immediately intuitive how to download the full story results, but participants did find those instructions in the guide. Percentages for themes were confusing to users, as they didn't all add up to 100%. One user wanted to see which stories were categorized under each theme.

- **Suggestion:** Provide improved in-context help. Also, giving users the ability to reveal more story headlines in a variety of ways, perhaps contextual to other result click-points in the UI, would seem to be a feature worth the effort. All users seem to be very interested in the very limited number of story headlines that appear, but confused by the ones that don't relate at all to their topical interest.

RESULTS – LANGUAGE: There was some confusion about what Top Words represented on first glance, and especially, the word cloud's relationship to the terms in the query. Participants intuitively wanted to click a word but didn't see anything change on screen; with assistance, they learned the word was added to the query, but weren't sure why. They asked if the query was made better this way, and what was the word doing there if it wasn't already in the query—or, in a related point, why doesn't the word cloud show the query words first by default? Participants didn't grasp the Word Space visualization easily; with some time, they began to understand the significance of the layout of words, but missed the part of the descriptor text explaining the layout easily.

- **Suggestion:** Simplify the help language and help design. Explain the relationship of query language to top words. At minimum, surface a dialog or alert when user clicks a word in the word cloud, so the user knows the word has been added to the query and the query has been rerun. It may also be worth exploring whether that functionality really improves the query refinement process, or whether users would be better served by other functionality when clicking a word, such as surfacing a list of stories where that word was used the most.

RESULTS – REPRESENTATION/ GEOGRAPHIC COVERAGE: While we didn't get many reactions on the Representation (or People and Places) tab during this usability testing phase, participants did sometimes misinterpret the Geographic Coverage map on the Explorer landing page in our first round of research. Many thought the map was depicting the countries of source publication, rather than places mentioned in the articles.
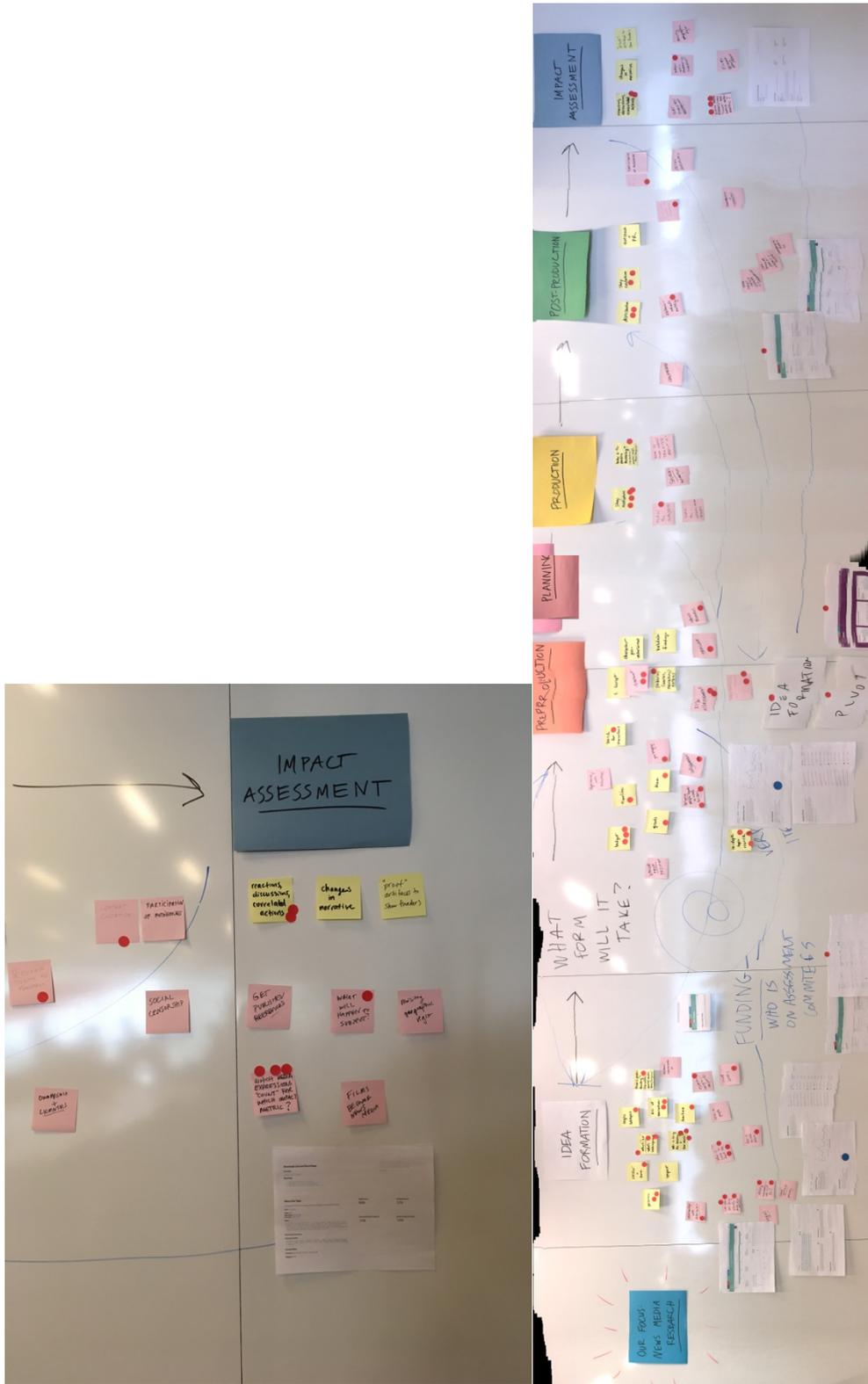
- **Suggestion:** Incorporate a new header or subhead, such as "most mentioned countries."

Appendix A: Image gallery (Discovery phase)

Workshop photos - participants

Workshop photos – journey map

Makers & Funders of Documentary Media, Findings Report | Confidential • Need to Know

Workshop photos – journey map

Appendix B: Participant worksheets (Testing phase)

Mika's worksheet:
https://docs.google.com/spreadsheets/d/1ZGbbLCBJ4adwuRPkHLdg5lbdcXmDPkxa8u6buSuFD_A/edit?usp=sharing

Liz's worksheet:
https://docs.google.com/spreadsheets/d/1t8pEkvf9MYMse3agU1fkfwdS0zgKsc4FU5eRbY10Qno/edit?usp=sharing

Meredith's worksheet:
https://docs.google.com/spreadsheets/d/1W-0uPJGgAIaHFTIR_HnpYwoPcFyBE3_iSkSzjkD4O_s/edit?usp=sharing

Hajnal's worksheet:
https://docs.google.com/spreadsheets/d/1a-CPBnyKow0egb5pIgPONcXBuTzRLkLjdNinmgMfU7w/edit?usp=sharing

Cynthia's worksheet:
https://docs.google.com/spreadsheets/d/1fO4Q1tq-IZfCrsaA2WY4iXKmNUl9zuj8ZYSfON5n0PQ/edit?usp=sharing