

## **Cracking the Code: Influencing Millennial Science Engagement - Outcomes Report** **A NSF AISL funded research collaboration with KQED, Texas Tech University and Rockman et al**

KQED, the Northern California PBS and NPR member station, and the College of Media & Communication at Texas Tech University have recently completed a \$3 million grant from the National Science Foundation (NSF) for the project [Cracking the Code \(CTC\): Influencing Millennial Science Engagement](#). The three-year grant provided funding for an unprecedented science media research initiative between science media professionals and science communication academics with the goal of identifying how best to engage younger, more diverse audiences with science media.

Over the course of this project, KQED and Texas Tech University have:

- Increased insight into younger audiences' engagement with science media;
- Identified missing and future audiences;
- Developed best practices for collaborative in-depth audience research;
- Created a new model for collaboration between science media content staff and academic science communication researchers.

The project built on Landrum's and collaborators' [existing science curiosity research](#). They developed a survey tool called the science curiosity scale (SCS) which measures science interest through a combination of behavioral and self-reported indicators. This research also expanded the understanding of underengaged or "missing" audiences for science media. For the purposes of this project, missing audiences are defined as individuals who are "science curious" but are not engaging with science content.

CTC's audience research centered on research questions about two of KQED's science properties: *Deep Look*, its YouTube series about unusual animals and plants; and science news reporting on the radio and online. We wondered:

- How can KQED adapt and expand upon existing research to understand the role of science identity and curiosity in millennial engagement and interest in science media?
- Which editorial tactics, platform choices, media formats, and engagement strategies – can increase millennials' curiosity and interest in science content, with special attention given to underrepresented and underengaged, "missing" audiences within the millennial and other generations?

The project team developed a framework for collaboration between media makers and academic researchers, designed audience research practices for reaching underserved audiences, identified best practices for producing science media content to meet audience needs, and more. More than 30 reports including studies, surveys and on-line essays were published and can be located [here](#).

### **Broader Impacts: Science Media & Reaching Missing Audiences**

KQED and Texas Tech University identified underserved audiences and conducted media tests and surveys, so that media professionals could more effectively design science media to meet such audience's needs. We documented our process with steps for how other science media producers can identify missing audiences in their own work:

- *Ask: what is a missing audience?* For this project, missing audiences were defined as “science curious” individuals, who are not engaging with science content for some reason.
- *Understand your existing audience.* Media makers must first have a baseline understanding of existing audiences, in order to spot areas for potential audience growth.
- *Define engagement and the key audience characteristic.* Consider how you will measure and/or define “engagement” and determine how to measure the key characteristic of your desired audience.
- *Identify Missing Audiences with Survey Data.* Finally, collect survey data using questions that capture engagement and the key characteristic of the “missing” audience.
- *How do missing audiences engage with science media?* Once you have identified your missing audience(s), it is important to identify their media behaviors and practices by conducting focus groups, interviews, and/or surveys.

As a result of this grant's research, KQED Science media makers now have a deeper understanding of what types of media (social, online, video, audio) and what communications factors (storytelling style, visuals, length, platform, etc.) influence science learning and engagement for “missing” and younger audiences. To read more about these insights, please visit this page (<https://www.kqed.org/about/16748/science-engagement-a-new-survey-in-2021>) , and to understand more about the larger project, visit this page (<https://www.kqed.org/pressroom/11830/cracking-the-code-kqed-texas-tech-wrap-3-million-national-science-foundation-grant>) for a final project summary.

### **Intellectual Merit: Professional Knowledge and Evaluation**

KQED and Texas Tech advanced professional knowledge in the journalism and science communication fields by building a model for collaboration between media practitioners and academic researchers and for novel audience research practices to inform science content creation. We implemented the following steps in our process:

1. *Practitioners Notice Issues in Practice.*
2. *Practitioners Formulate Questions.*
3. *Practitioners Discuss Questions and Review Literature with Researchers.*
4. *Researchers Refine Research Questions into Hypotheses.*
5. *Researchers Draft Study Design.*
6. *Researchers and Practitioners Review and Provide Iterative Feedback on Study Design.*
7. *Researchers Launch Study and Collect Data.*
8. *Researchers Analyze Data.*
9. *Researchers Present Findings to Practitioners.*
10. *Researchers and Practitioners Discuss Findings.*
11. *Practitioners Think about Implications for Practice.*

12. *Practitioners May Think of Further Questions (the process repeats).*

External evaluator Scott Burg completed a comprehensive process evaluation, and documented his recommendations for future collaborations between researchers and science media producers. He noted that the project was impactful in bringing together different strengths of its science communications researchers and science media practitioner participants, raising awareness around the importance of audience research and insights, and facilitating effective communication and workflows for collaborative teams. The full report is posted [here](#).