Caveat Emptor: Becoming a Responsible Consumer of Research

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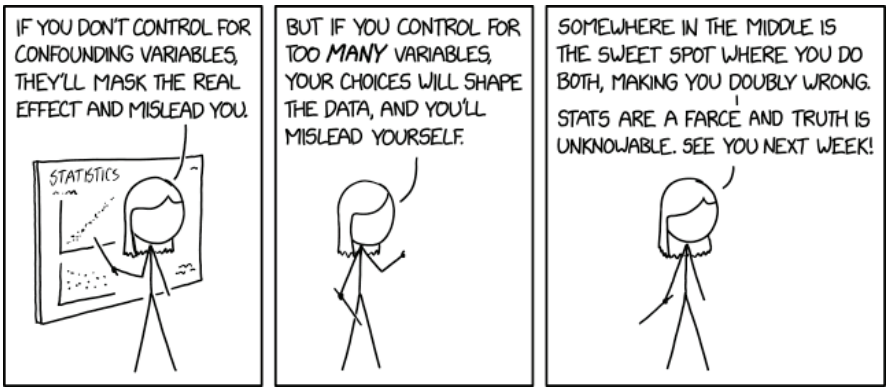
Lies, Damned Lies & Statistics?



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"There are three kinds of mendacity: lies, damned lies, and statistics."

Though it's unclear who coined that phrase (some say Mark Twain, some say Benjamin Disraeli, others various 19th century English noblemen), it's become ubiquitous, particularly when one is looking to cast aspersions on statistics one happens to disagree with. And that can all be good fun, particularly if those aspersions are cast during a friendly argument over an adult beverage or two.

But the fact remains that there is a lot of questionable research out there.

Why should you care?

The reason research exists, the reason research projects are undertaken in the first place, is to help explain the world. People have questions about what's happening and why, and research endeavors to answer those questions, on the way toward advancing knowledge.

1. https://xkcd.com/2560/ This work is licensed under a Creative Commons Attribution-NonCommercial 2.5 License.

Associations in particular engage in research in order to make data-informed decisions. That work can be internally focused, as when the association sponsors or conducts research on members and other audiences to make decisions about how to invest resources in serving those audiences. Or it can be externally focused, as when the association sponsors or conducts research on the industry or profession the association serves to help members make decisions about how to invest their resources. Ultimately, association executives seek to reach fact-based conclusions that will help them, their staff, and their members choose what to do and be confident that those choices are based on evidence.

Good research does not guarantee good decisions, but it certainly helps. And bad research, barring getting lucky and guessing right, almost inevitably leads to bad decisions.

Too frequently, the research projects associations produce don't pass the validity test, for a variety of reasons: poorly designed or framed questions, poorly designed reply options, over-relying on one particular type of research, samples that are too small or are not truly representative, random samples, cookie-cutter research instruments, etc.

The goal of this whitepaper is not to teach you everything you need to know to stop doing whatever you're currently doing and become a professional researcher. If you're looking to change careers, we support you, but that's beyond our scope.

Rather, we recognize that association executives are frequently tasked with leading or managing research programs but may have little formal background or training to prepare them to do that well. This monograph will explain core concepts in designing and executing a high-quality research program, identify good practices, and share the stories of associations that are doing research right. Our goal is to help readers become confident consumers of research, able to distinguish reliable and unreliable studies and sources and to understand what makes them so. We also want to help readers become responsible sponsors of research, producing credible, valid studies to the benefit of the professions or industries their associations serve.

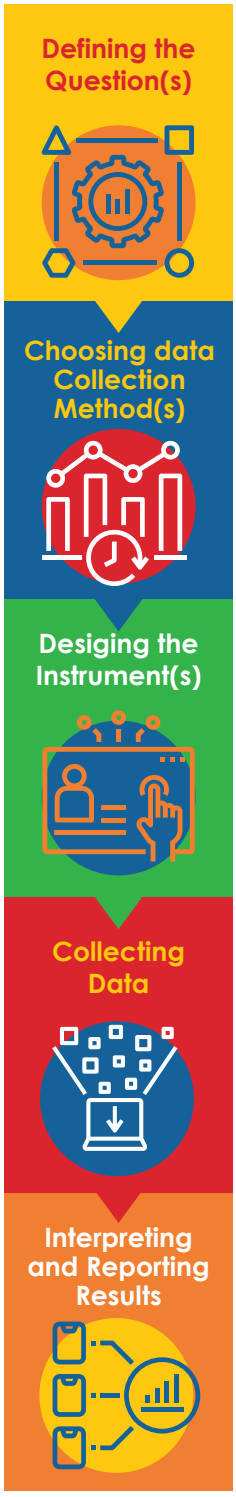
What is an "Association Research Program?"

We should begin with a common understanding of what "research" is, and what it is not. Research is a structured process to collect, analyze and interpret information to help us better understand people, situations, or other phenomena of interest or concern. Research is not "merely gathering information or transporting facts from one location to another"[2] without analysis or interpretation.

Readers may already be familiar with the stages of a research project: defining the question(s), choosing data collection method(s), designing the instrument(s), collecting data, and interpreting and reporting results.

But what is an "association research program"? Is it different from an individual survey, focus group, or report?

As we define it, an association research program is an ongoing series of research activities undertaken by an association. It is bigger than any single piece of research or project, though the specific studies an association undertakes certainly fall into the domain of the research program.



An association research program requires making choices about management and staffing, whether the work is centralized in one department, distributed across several departments, managed by a cross-functional team, or partially or fully outsourced, which may vary from study to study. Research program managers also need to address how volunteer committees might help design, support, participate in, and publicize the results of the association's research work, which may also vary from study to study.

There are at least three different types of research projects associations engage in: internal, external, and peer-reviewed.

1. **Internal research** is research on or about association members and other stakeholders to inform the association about the effectiveness of existing efforts or feasibility of new programs, products, or services (i.e., the "internal" work of the association). Other terms you may use or hear include operational research, business intelligence, market intelligence, decision support systems, innovation research, or strategic monitoring.

2. **External research** is research on or about the profession or industry the association serves to inform members, the entire community of stakeholders, and/or the general public. Other terms you may use or hear include industry or profession research, market research, trends analysis, industry or profession benchmarking, or industry standards.

3. **Peer-reviewed research** is research conducted by the members of the association or of the larger profession or industry the association serves that is subject to the peer-review process and is then published by the association in its journal, magazine, or other outlets.

We're going to focus on the first two, as the third lies outside our definition of an association research program.

2 Paul D. Leedy and Jeanne Ellis Ormrod, "Chapter 1: The Nature and Tools of Research," in Practical Research: Planning and Design, 12th ed. (New York, NY: Pearson, 2020), pp. 1-2.

Association research programs also address opportunities for research collaboration. Research collaborations can be internal, involving groups like affiliates (chapters or components) or special interest groups within the association community. They can also be external, conducted with other associations and organizations in the profession or industry the association serves that have common interests regarding research questions, stakeholders, respondent pools, and results and findings distribution or programming.

As in other domains in association management, research is more successful and effective when it is collaborative, intentional, planned, and supported by a formal strategy, even if the association only produces one study a year or even every few years. An association research program may support large- or small-scale studies with any number of single- or multiple-method approaches. It may focus primarily on internal domains or external domains, or it may address both.

The association research program is the umbrella structure and strategy under which groups of people (staff, volunteers, association partners, external partners) work together over time to conduct particular research projects or studies, where they may use a variety of different methods to answer questions about the association itself or the profession or industry the association serves.

Key Research Concepts: Let's Get Nerdy!

"In fact, the world needs more nerds."
Ben Bernanke[3]

Anyone consuming or sponsoring research—including you, Dear Reader—needs to be familiar with some key research concepts. Without dropping too far down into a very complex and highly academic (read: dull) rabbit hole, the purpose of this section is to offer a high-level review of common terms and concepts used by professional researchers. If you do, in fact, want to go down that rabbit hole, see **Upping Your (Research) Game** on page *42*.

Let's dive in!

Sample

A sample refers to the people ("subjects") from specific populations or groups who are invited to participate in research. (The people who choose to participate, "respondents," are a subset of the sample.) The validity and reliability of research findings are partially dependent on sample size and variability, as well as on the way the sample was constructed.

There are two main types of samples:

- *A representative sample* is a sample that is similar to, and thus representative of, the population from which it was drawn. A representative sample is typically created using random sampling methods. This type of sampling enables conclusions about the population to be drawn from the results with a relatively high degree of confidence, as the people invited to answer the survey proportionally mirror key attributes of the entire population (e.g., 55% of all members are women and 55% of the sample are women).
- *A purposeful sample* is a nonrandom sample of a population, where a researcher locates participants who possess specific characteristics important to the research, rather than randomly sampling from the entire population (e.g., recruiting ten association executives who've all earned their CAE and who represent individual membership associations). Purposeful sampling is also known as deliberate, judgement, selective, or subjective sampling, and is most often used in qualitative research or in situations when only a limited number of people are appropriate subjects or are able to participate due to the research design or goals. This type of sampling has two major drawbacks: the strong possibility of sampling bias and the inability to draw statistically valid inferences for the larger population. However, researchers may be able to validate initial findings with a follow-up survey of a representative sample of the population.

Variable

A variable is anything the researcher is studying that can be measured (e.g., membership status, career stage, event satisfaction, etc.). A *dependent* variable is one that is explained or predicted by an *independent* variable that either caused the dependent variable to exist or to change in some way (e.g., measuring the impact of employer funding [independent variable] on likelihood of membership renewal [dependent variable]).

3. https://www.qualtrics.com/blog/research-quotes/

Validity

A basic requirement for research integrity is that the researchers can affirm the data are real and valid. It is critical, therefore, for researchers to check their data to identify and remove invalid data, such as:

- Untrustworthy data (out of date, unclear, or inaccurate data)
- Prematurely collected data (data collected before respondents have experienced the phenomenon being studied or have been able to form reliable opinions about it)
- Fabricated data (fake or made-up data)
- Falsified data (data that's been tampered with, trimmed, or otherwise adjusted to fit into or align with the desired conclusion)

Reliability

Reliability is the degree to which a research method provides consistent results; that is, the instrument would return the same results if administered again to similar sampling groups (assuming factors being measured have not changed significantly in between). Levels of reliability in data analysis range from:

1. Strong/conclusive (provides a high level of confidence in results)
2. Indirect/suggestive (provides a moderate level of confidence in some conclusions, and identifies areas for further exploration, analysis, or research)
3. Interesting/tentative (provides clues for further exploration, analysis, or research)
4. Inconclusive (difficult to draw any clear or valid conclusions; new/revised research approach needed)

Statistical Significance, Generalizability, and P-values

Statistical significance describes researchers' level of confidence that a finding can be generalized to the sampled population's perspective or preferences and isn't the result of chance, randomness, or another factor skewing results (e.g., sampling bias or other flaws in design). Researchers use **p-value (probability value)** calculations to measure the likelihood that the finding is NOT true. The lower the p-value, the more likely it is that the finding is real and didn't happen by chance.

Margin of Error and Confidence Interval

The margin of error accounts for the gap between the actual research finding and the way the full target population would likely respond if researchers could ask the question of every single one of them and they all responded. It is calculated in research as "confidence interval" and is expressed as a percentage, with a point differential between the actual research results compared with the likely results for the entire population (e.g., 95% confidence interval, +/-3% margin of error). As the confidence interval rises, so, generally speaking, does the margin of error, unless the researcher is able to work with a large sample.

Bias

Bias is a systemic research error that produces a gap between the data gathered and the actual truth. It is caused by intentional or unintentional influence from person(s) involved in the research, can occur at any stage of the research cycle, and can threaten the validity of the research. It is critical to identify bias that may be present in research, understand the effect it may have on results, build in safeguards to ameliorate its effects, and recognize that even with the best of intentions, some level of bias may persist.

Some of the common types of bias you may encounter include:

- *Sampling bias* – an error that occurs when a sample does not accurately reflect the target population. This happens most often in nonrandom sampling. Researchers can use representative sampling to mitigate sampling bias.
- *Response bias* – an error that occurs when a segment of the sample does not or cannot respond to research questions. Researchers can identify the proportion of the sample populations affected and increase efforts to get responses from these populations to mitigate response bias.
- *Recall bias* – an error that occurs when respondents cannot accurately remember the information necessary to answer research questions. Researchers can frame time-related questions clearly (e.g., instead of "three years ago," say "in August 2019") or collect data both before and after an event of interest occurs (i.e., prospective study and retrospective study) to mitigate recall bias.
- *Nonresponse bias* – an error that occurs when subjects refuse to respond to particular questions or abandon the research instrument before completing (e.g., dropping out midway through the survey). This is particularly concerning if the subjects are different in some identifiable way from subjects who do complete the research instrument. Researchers can follow up with nonrespondents ("callbacks") to encourage responses to missing questions to mitigate nonresponse bias.
- *Respondent bias* – an error that occurs when respondents bias the results by giving answers that don't reflect their true beliefs or behaviors. Researchers can work with third-party data collectors, accept anonymous responses, use mixed methods to address sensitive questions (e.g., a survey plus interviews or focus groups), and avoid discussing desired results of the research to mitigate respondent bias.
- *Instrument/measurement bias* – an error that occurs when responses don't reflect respondents' true beliefs or behaviors because of flaws in the design of the data collection instrument (e.g., survey questions, interview script, focus group protocol, etc.) or the response measurement scales. Researchers can use validated instruments (i.e., those that have been used previously and have proven to be effective), ask multiple questions on the same topic, and use mixed methods to mitigate instrument/measurement bias.
- *Interviewer bias* – an error that occurs when the interviewer influences participants in a way that leads to biased responses (e.g., through body language, facial expressions, verbal cues, or leading questions). Researchers can work with neutral, third-party interviewers who follow a standard interview script and protocol for all interviews to mitigate interviewer bias.
- *Reporting bias* – an error that relates to how results are communicated (e.g., reporting positive but not negative results, not reporting all results). Researchers can develop an analysis approach and findings communications plan before any results are known to mitigate reporting bias.
- *Coding/entry error* - errors that occur when response data are transferred from one system to another (e.g., data collection instrument, databases, analysis software, etc.) and/or translated into summary codes to aid in efficient analysis and reporting. Researchers can perform quality-control spot checks and ensure that everyone handling data understands and follows good practices in data preservation and statistical techniques to mitigate coding/entry error.

For more information on various types of cognitive bias, see the *Cognitive Bias Codex.*[4]

4. https://www.visualcapitalist.com/wp-content/uploads/2021/08/all-188-cognitive-biases.html.

Correlation and Causation

Readers are probably familiar with the phrase "correlation does not imply causation" and understand its colloquial use. In research, however, "correlation" and "causation" have precise meanings. *Correlation* is a statistical technique used to define the strength of a relationship or pattern between the values of two variables (e.g., as ice cream sales increase, so do sales of sunglasses). It doesn't define the nature of the relationship. *Causation* uses statistics to show that a change in the value of one event or outcome will cause a change in the value of another event or outcome.

Researchers need to beware of jumping too quickly to conclusions when statistics signal a possible causation and/or correlation. Many instances of statistical correlation are coincidental (e.g., consuming ice cream probably doesn't *cause* people to buy sunglasses!).

For more on this topic, check out "Ascertaining Causality," an excellent explainer video that provides three criteria to judge causality, illustrated by simple examples, by Dr. Joseph N. Cohen, Associate Professor of Sociology, Queens College in the City University of New York: ***https://youtu.be/IOUWP4n7gds***.

Data Hygiene

In research, data hygiene typically refers to data management activities that take place after data collection ends and before the analysis phase begins. At this stage, researchers should review the raw respondent data to identify and flag invalid data or data-entry errors. They may also apply coding to respondent data to facilitate analysis by research software or as another check for data-entry errors. Just like it sounds, data hygiene involves cleaning the data to ensure the greatest degree of accuracy possible in the study's results.

There are two other critical concepts responsible association research consumers and sponsors need to understand: Research Ethics and Antitrust. We felt these topics were so important and complex, we reached out to well-known experts in the association industry to address them: Sharon Moss, Ph.D., CAE, President, ASAE Research Foundation and Jeff Tenenbaum, Managing Partner, Tenenbaum Law Group PLLC. You will find Dr. Moss's interview, **Ethical Practices in Research,** on page ***36***, and Mr. Tenenbaum's interview, **Avoiding Antitrust Liability in Association Research Projects,** on page ***31***.

Methods of Research: Curiosity with a Purpose

"Research is formalized curiosity. It is poking and prying with a purpose."
Zora Neale Hurston[5]

Regardless of whether the questions you're asking pertain to your own members or to the industry or profession you serve, you have variety of options for answering them, which means you have some choices to make regarding what type(s) of research you want to conduct.

- Quantitative v. Qualitative
- Primary v. Secondary

Quantitative research is designed to ask questions and collect responses numerically, with the goal of coming to the kinds of answers that can be described by levels of statistical significance and degrees of confidence (all that "P-value" and "margin of error" stuff we just covered). Surveys are the most common type of quantitative research, and they can provide a high level of confidence in the results if the questions and answer options are well-designed (more on that in the **Flaws & Fallacies** section below).

Qualitative research is designed to gather data through conversation. The results are necessarily impressionistic and anecdotal, but they allow you to delve into subjects' motivations, the *why* behind what they think, prefer, and do. Interviews and focus groups are common types of qualitative research. They provide flexibility that surveys lack and can allow researchers to also observe things like tone of voice, body language, and even group dynamics. The quality of the results is highly dependent on the level of trust the interviewer can create with and among participants.

Primary research involves working directly with research subjects, whether that means sending them a link to a survey or inviting them to participate in a focus group, to collect original data directly intended to help you answer your specific research questions.

Secondary research involves reviewing data and studies that already exist, where the information was collected by other people for other purposes than to answer your particular research questions, though that information has relevance to your questions. Researchers often begin projects with secondary research like literature reviews or querying existing data collections maintained by governments or educational institutions to provide context, help them understand the larger STEEP (social, technological, economic, environmental, and political) forces that may impact their studies, and help them form good questions.

As you're creating a plan to collect data, there are a few other choices you'll need to make:

- Formal v. Informal
- Active v. Passive

Formal research happens when you design a study – quantitative or qualitative, using primary or secondary sources (or some or all of the above) – with intention around questions, data collection methods and instruments, timeline, budget, participation goals, etc.

5. https://www.qualtrics.com/blog/research-quotes/

Informal research happens when you observe and make note of information without all that structure. We all do this all the time, often without really thinking about it, as we interact with other people and make note of what they tell us.

Informal research can look like a colleague sharing her opinion about why registration for your next annual meeting is running higher than usual, a member making a request of your customer service team, a reader commenting on an article posted on your association's website, or a committee chair expressing her thoughts about a new service your association is considering. These types of interactions influence decisions we make every day, albeit often subtly and subconsciously.

You shouldn't make major decisions based entirely on informal research, but these types of observations can provide valuable clues to questions that merit further study.

Active data gathering involves intentionally requesting information from research subjects. You have a particular question you're trying to answer, and so you ask people for information that will help you answer it. Active data collection generally happens at a particular point in time and can produce somewhat subjective results, depending on the quality of your research instrument design.

Passive data gathering involves collecting data, often mediated by technology, from a user without her taking any intentional steps to provide it to you. Associations do a lot of passive data gathering. They track things like member and customer purchases and monitor web analytics, activities that allow association executives to measure behavior in an objective way over time.

As Elizabeth is fond of remarking, reviewing passive behavioral data acts as a "reality check" on other data collection methods, in that what people report doing or preferring doesn't always match what they actually do or prefer, and you can sometimes learn surprising things about what people use and value based on observing their actual behavior.

Flaws & Fallacies: Research Gone Wrong

First, a word of caution: This is not a comprehensive list of anything and everything that could go wrong in your research study design or execution. Rather, we want to make you aware of some common problems that occur, so you can guard against them effectively.

Before we dig into flaws that are typical of certain types of research, be aware that all types of research are subject to people answering the way they think they should answer rather than being honest about what they really think, prefer, or do (aka the respondent bias we mentioned above). When respondents shade their answers in ways they think will please the researcher, it's called the *Hawthorne effect.* When respondents shade their answers in ways they think will make them look good, it's called *social desirability bias.* Don't just take people at their word, whether you're asking your questions yourself or using a neutral third party, and whether you're presenting those questions through surveys, interviews, or focus groups. Make sure you're validating with other types of data as well.

Quantitative Research

One of the biggest fallacies inherent in quantitative research is: **Research = Survey**. Surveys are one tool in the research toolbox, but they are not the ONLY tool in the research toolbox. In fact, they're not always the best or most appropriate tool.

A related problem with surveys is that, because they provide reassuringly specific answers, it's tempting to over-rely on them, which can lead to over-surveying audiences. That, in turn, can lead to response bias. As noted above, response bias can be a result of bad study design or execution, but there are also people who just generally like to respond to surveys (or are at least willing to respond) and people who just generally don't. As an association does more and more surveys, fewer and fewer people who are neutral-to-disinclined to respond will respond, which means the association will end up over-sampling the people who like to respond, and they are not representative just by virtue of their willingness to participate.

Surveys are also particularly susceptible to bad design, either in the questions or in the response options. One common survey flaw is the leading question, which is constructed – often unintentionally – to direct people to the response the researcher wants to hear. Another common problem with question design is the "double-barreled" question, where the survey asks people to assess two things in one question. A classic example is: "How satisfied are you with your current pay and benefits?" What if the respondent is happy with her pay but not her benefits (or vice versa)? Or what if she is NOT satisfied at all? The framing of the question has already signaled that she's supposed to be satisfied. Will that influence her response? It could.

Surveys can also have response design flaws. The most common of these is a rating scale where the midpoint is not neutral. This is basically a leading response, where the design is subtly pushing respondents to (most typically) an overly positive assessment, e.g., by offering three positive response choices and only one negative.

Another common response flaw is to omit a "not applicable" option or the ability to skip questions. If the survey design forces people to answer questions that don't apply to them, they'll either abandon the survey or give nonsense answers that skew the data.

Why is bad design a particular danger for surveys? Because you get one chance to get it right.

When conducting interviews or focus groups, the interviewer can ask follow-up questions, edit the interview guide based on what she learns as the study progresses, and even go back to earlier participants for more information if she spots a significant gap. But once a researcher deploys a survey, it's too late to fix flaws in the question design or response options. She can't alter a survey that's in the field without invalidating all the existing responses.

Qualitative Research

Qualitative research is particularly susceptible to the Hawthorne effect and to social desirability bias. People are even more likely to give an interviewer the answer they think she wants – or that will make them look good – when the interviewer is sitting right in front of them. This is particularly the case if the interviewer isn't careful to acknowledge responses in a neutral way. The researcher does need to develop rapport, as the quality of qualitative research is highly dependent on creating trust between the researcher and the subject But demonstrating enthusiasm for particular responses can subtly shift the subject's responses to subsequent questions in ways that he perceives will earn him more approval.

Focus groups are susceptible to groupthink. Once one person has spoken up on a question or issue, that can establish a norm that's hard for others to disagree with, particularly if the first speaker has actual or perceived clout in the group (a board chair, a C-suite executive, someone who's prominent in the profession or industry). People also have different levels of comfort speaking up in groups, and that can lead to only a few voices or perspectives dominating the conversation without careful and skilled facilitation.

Qualitative research also has an inherent signal-versus-noise problem, in that "data" is not the plural of "anecdote." Humans like and remember stories, and that's what's happening in focus groups and interviews – the researcher is collecting stories. But those stories and perspectives can't necessarily be applied across an entire audience, whether they be members, customers, or the profession or industry the association serves. As we pointed out earlier, qualitative research is useful for getting at the why of people's thoughts, preferences, and behavior, and it is very good at providing guidance for further research or experiments. But it is not sufficient on its own to drive decisions, particularly ones likely to incur substantial costs of time, effort, money, or reputation.

Primary Research

The biggest drawback to primary research is that it's expensive. Whether fielding a survey, interviewing people, or running focus groups, well-designed primary research requires a significant investment of time, effort, and money.

Primary research is also particularly susceptible to the kinds of biases we've already talked about. The methodology can be biased; the sample can be biased; the questions can be biased; the response options can be biased. Any of those errors will render the results less illuminating than they could be, which can lead decision-makers to make bad choices based on bad data.

Primary research also means the researcher is working directly with people, which carries significant ethical responsibilities. Entire books and graduate school courses are devoted to ethics in human-subject research, but for a brief primer on this topic, see **Ethical Practices in Research** on page *36*.

Secondary Research

One of the biggest challenges with secondary research is vetting the quality of sources. You can Google any question or issue and find hundreds of thousands or even millions of related links. But how do you know which sources are reliable? Even after you vet the integrity of a given source, how do you know that the information you've found is applicable to your situation, since the data weren't collected with the express purpose of answering your questions?

A related flaw in secondary research is timeliness. Even if you find a very good study from a reliable source, how old is it? Is it still accurate?

To answer those questions, educate yourself about how to vet sources. Investigate the background and methodologies of existing databases and studies. (Making those things public as part of the data set is one indicator of quality and reliability.) Learn how to form good search engine queries, and take the time to go beyond the first 20 links. In short, build your information literacy skills. For more on how to do that, see **Developing Discernment about Research: An Interview with Joyce E.A. Russell, Ph.D.** on page *32*.

Putting It All Together: Being Responsible About Research

"With great power comes great responsibility."

Benjamin "Uncle Ben" Parker, *Spider-Man*

How does one become a responsible consumer and sponsor of research?

First, realize that there is no "one true way." That's reassuring—there are many ways to get at whatever it is you're trying to learn. But it's also concerning, because there's no one guaranteed path you can follow to be assured that the research you find or create will be a quality product that avoids the many biases, traps, and pitfalls we've identified above and provides a solid foundation for the decisions you need to make based upon it.

Consuming Research Confidently

As noted in the previous section, consuming research responsibly requires building and exercising information literacy skills. As defined by the Association of College & Research Libraries:

> ***"Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning."***[6]

Be skeptical as you locate and evaluate research. Verify sources. Be aware of the types of bias that may have crept in, even unintentionally. Investigate methodology (yes, read the methods section, even if it seems a little dry). If something seems off, or too good to be true, it probably is. Ask questions. Be particularly cautious about anything that fits too neatly into an outcome you're personally or professionally invested in. Confirmation bias is real, and pernicious. Seek additional studies, including disconfirming information. When you use and communicate research, be ethical. Provide context. Be honest about your chosen study's limits, about what it proves, and to what degree.

Sponsoring Research Responsibly

When you're sponsoring or conducting research projects, start with data that exist, whether from internal or external sources. There's a reason many professional researchers include a literature review in their research study reports. Existing databases and studies—association, government, NGO, academic—can give you a strong starting point by helping you recognize larger societal forces that may be affecting your audience or your question and understand relevant work that's already been done. This is almost definitely not going to be your endpoint; the work that's already been done is likely too broad or not directly to your point. But it will help you better frame your research questions and identify your target audience.

Speaking of, one of the best investments you can make towards a successful and useful study outcome is to spend more time on question design and refining your questions. Better questions lead to better answers.

6. *Framework for Information Literacy for Higher Education,* pg. 8

This is one of the reasons outsourcing at least part of your research program to a third party can be a good practice. It's difficult to keep your own biases out of question formation, aka instrument/measurement bias and/or interviewer bias. When it's your own association or the profession or industry you serve, you often have a perspective on how you'd like your study to turn out, and it's very easy for that to creep into your question design. You may end up framing your questions to subtly, even subconsciously, encourage the results you want to see. Make sure multiple people, particularly people who don't have a stake in the outcome, review your questions and, in the case of surveys, your response options before you go live.

Relatedly, beware organizational silo myopia. When designing a research study, it's tempting to be heads-down focused on your own department or program area and audiences. You have questions you need to answer, and you'd like to get them answered without a lot of bureaucratic delays. But other departments or program areas in your association may already know the answers to your questions, or at least have data that can help you answer them. They have institutional knowledge but a different perspective, which may help you frame better questions. They may also have access to different audiences that you could include to improve your sample. It takes more time, but as you'll see in the Association of American Medical Colleges case study, when different program areas work together across silos, a stronger study frequently results.

Taking that to its next logical step, you're probably familiar with the proverb: "If you want to go fast, go alone. If you want to go far, go together."

As you are choosing your research methods, consider: Are you going alone or together? That is, should you recruit a partner?

Association collaborative research projects or joint alliances typically form around research related to cross-profession or industry opportunities or challenges, particularly where the scale or urgency of the research program may be beyond the capacity of any single association to conduct. By joining forces, sponsoring associations can distribute costs (not all of which are financial) and responsibility for the research program. Sharing the load carries numerous benefits: It increases the capacity to hire external research support, widens access to respondent pools, improves completeness and inclusivity of data and findings, leverages each partner's communications channels for dissemination of results, and offers the ability to work together on follow-up studies to address challenges or opportunities revealed in the initial findings.

Research partnerships, in short, can ameliorate many of the problems that creep into question formation, data collection, fielding instruments, and sharing results. Both the American Association of Colleges of Pharmacy and the Casualty Actuarial Society case studies illustrate the advantages of multi-association research collaborations.

That said, collaborative projects take longer to complete. That's not necessarily a bad thing. In fact, in our case studies, you'll see excellent examples of associations that assembled large teams of partners to enable them to sustain far-ranging and impactful inquiries over time, and associations that opted to go it alone, also with good results. Assess your resources, be realistic about your timeline, and think through who (else) might benefit from participation. But don't assume you have to limit the scope of your research to only what your own association can support or accomplish.

When thinking through your timeline, make sure to allow enough time to both conduct your data collection and analyze your results, including planning for contingencies. What if you experience response problems that are going to skew your sample? Or you're trying to conduct interviews during your members' busy—or vacation—season? What if your results are inconclusive? Or your volunteer leaders are slow to provide the feedback you need to share your findings with your larger membership? Make sure to build time into your schedule in case things don't go precisely according to plan.

Another good practice is to mix your methods in any particular study. Secondary research is a relatively efficient way to get up to speed on your chosen topic or questions, and to learn whether some of them have already been answered. You can then turn to primary qualitative research to learn more about your topics or questions directly from your target audiences, getting at their why. Those insights can then help you sharpen your focus on your questions and audience, so you can design an efficient, effective, highly targeted quantitative instrument that provides clear answers in which you can have a high level of confidence. The IEEE case study details innovative methods of data collection that produced insights that would've been otherwise inaccessible to the project team.

Make sure you document your methodology. It's a good practice for demonstrating your research's validity, and also helps staff or volunteers who may later update your research understand why you made the choices you did (remember, there's no "one true way"). Those people will have the background they need to re-run that same study or conduct follow up research as appropriate.

Involving the people who are actually going to conduct the research, whether they're staff, volunteers, or third-party partners, early in the discovery and planning process can help with all of the above. It allows you to rely on their expertise to align the strategy that's going to form the foundation of your project with your association's research goals.

When you're planning your study, don't forget the part where you communicate your results. Think through how you plan to present your findings, to whom, and how you plan to distribute whatever reports or other collateral you create. Remember, you have many options beyond the charts and graphs that are built into every data analysis tool from Excel to SPSS. While charts and graphs can help tell your story, they're not the only way and often aren't even the best way. Our case studies provide excellent examples of alternatives, or you can check out some of the resources shared in **Upping Your (Research) Game** on page *42* or **Additional Resources** on page *46* for additional inspiration. This is another instance where partnering with another association or group of associations can be highly beneficial, as they'll bring additional capacity and insight to this stage.

Ultimately, your goal is to become a learning organization, where your entire team develops a deep curiosity about what drives your members, about their worlds and operating environments. You need to get to know members beyond their purchasing and posting habits to uncover their biggest problems and most important goals and provide the right solutions to the right people at the right time (and price).

You accomplish that by becoming a sponge for information, and by sharing that information openly and transparently within your association's staff team and with your volunteer leaders and members. Over time, you'll create a virtuous cycle of ongoing studies that ask increasingly insightful questions, working with the entire community your association serves to keep advancing your research program. That's the point of our whole "research program" concept: You're never "done."

It's important for associations to get this right, both so that association executives have the best possible chance of making good decisions about how to invest limited association resources to generate the best return for members, and because associations are viewed as trusted, unbiased sources of information for the members and other audiences we serve. It's incumbent on us to provide quality research products so we remain worthy of that trust.

Research can be very complex, even for experts. We hope this whitepaper will help you to form a working understanding of common concepts and approaches in research, so you can be an informed buyer. But when you're working on a particular research study and something doesn't make sense, speak up! The experts, whether internal or external, supporting your association's project can explain what's going on—in fact, they'd probably be delighted to do so. You'll learn something new, and you may even discover an opportunity to improve the research for participants or end users. There are no bad questions!

CASE STUDY
American Association of Colleges of Pharmacy: Creating and Pivoting "Pharmacists for Healthier Lives"

"Start with one good question."

Lynette Bradley-Baker, Ph.D., CAE
Senior Vice President of Public Affairs and Engagement

What do pharmacists do?

"The general public thinks of the person dispensing medications in their local pharmacy, and that's a prominent and important role in society, but we know as members of the pharmacy profession that pharmacists are embedded in or associated with every healthcare setting, coordinating care for patients," said Lynette Bradley-Baker, Ph.D., CAE, Senior Vice President of Public Affairs and Engagement, American Association of Colleges of Pharmacy (AACP).

In 2018, as part of its strategic plan, AACP set out to create a "new portrait of pharmacists," one that captured their full contributions to patient care and healthy lifestyles, with the goal of educating the public and recruiting more students into a rewarding and essential healthcare career.

"The average person has a total lack of knowledge of the full range of pharmacy services: eliciting information from patients, helping prevent negative drug interactions, identifying when patients' prescriptions will not be covered by their insurance, contacting patients' doctors to find alternative medications that are covered or are less expensive. Pharmacists do so much more than put pills in a bottle," said Bradley-Baker.

AACP set out to correct those misunderstandings.

Working with an external communications agency and a coalition of partners in the pharmacy profession, AACP launched qualitative and quantitative research focused on three groups:

- An online survey (n=886) of a representative random sample of the general U.S. adult population (aged 18 or older), with a particular focus on women aged 35-55 who had been identified in previous research the outside firm had conducted as caregivers who were relatively unfamiliar with the pharmacy profession. (That is, they had no close prior personal relationship with a pharmacist.) The survey focused on perceptions of the profession, services received, and outcomes of interactions with pharmacists.
- An online survey of practicing pharmacists (n=200), segmented into two groups: those in practice 15 years or less, and those in practice 16 years or more. The survey focused on how pharmacists view themselves and where they think the profession is going.
- Interview surveys with 173 pharmacy students, both student leaders and "regular" students drawn from AACP's existing student networks. The surveys focused on learning why the students chose to go into the profession, how they see their professional development progressing, and their future career plans.

During the primary research phase, AACP learned some critical things:

- Some patients had more of a transactional relationship with their pharmacist and didn't understand their pharmacist's role as a key member of their total healthcare team.
- Some practicing pharmacists had trouble making the connection between their comprehensive pharmacy education and their day-to-day roles serving the community.
- Some practicing pharmacists were not happy in the profession, and, as a result, there were anecdotal tales of discouraging students from going to pharmacy school.
- Pharmacy students were happy with their decision to enter the profession, and particularly with their interactions with practicing pharmacists as part of their experiential education, which helped them plot their professional course after graduation.

AACP's research resulted in Pharmacists for Healthier Lives (***https://pharmacistsforhealthierlives.org***), an online campaign that includes a website and social media (paid, earned, and organic) that seeks to deliver the message to the general public that, as Bradley-Baker described, "pharmacists help people live healthier, better lives. They are accessible, knowledgeable, highly educated professionals who are fully qualified, capable, and willing to have a positive impact on patient health."

The campaign is also directed at practicing pharmacists. As Bradley-Baker said, "We learned that some practicing pharmacists didn't feel like they were fully using their education in their current role and, as a result, saw the job as 'routine.' We want to help them realize how influential they are. Their job is not just routine; it touches the lives of patients every day. The fact that you have an instrumental role to deliver the right drug to the right patient at the right time in the right dose so that it is safe and effective is extraordinary."

What were the results?

In its first year, 2018, the campaign generated nearly 20 million media impressions and nearly 16 million video plays, reaching 5.7 million people among AACP's target audience. The site itself drew 3 million engagements.

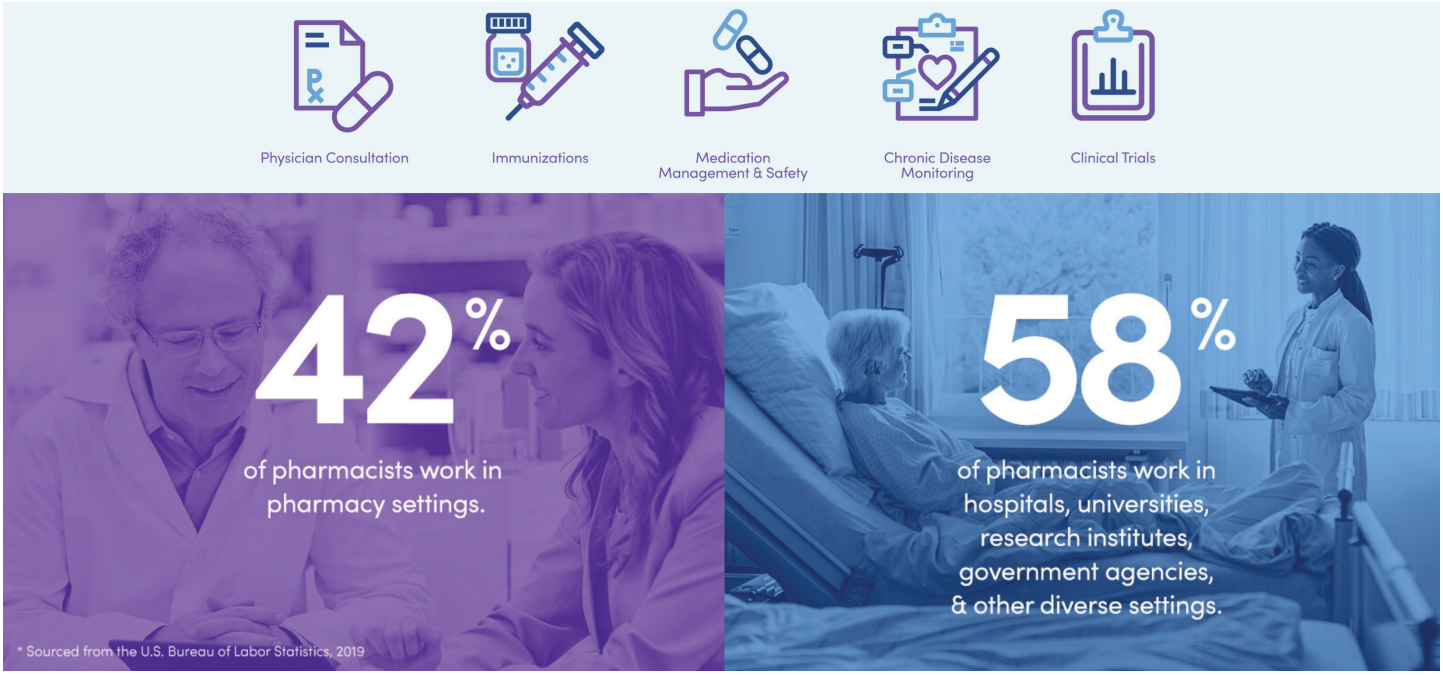
In year two, 2019, the campaign had 10 million media impressions, with the site drawing another 3 million visits, and the video drawing 7.1 million additional views.

Did AACP learn anything surprising as the campaign matured?

"It takes a significant amount of work to generate earned media and social media," said Baker-Bradley. "Social media is everywhere, but getting messaging out to a broad audience effectively is a science. People aren't just going to come to our site—we have to draw them in. We also have to keep updating the site with new content to bring people back and get them to share it on their own networks. Sadly, good information doesn't move as quickly as bad information or controversial takes. We must always be looking to the future as well. Social media is where it's at right now, but who knows how we'll be getting our messaging out most effectively in the future?"

We know what you're thinking: Year two was 2019. What about COVID?

"When COVID hit, we had to immediately shift our focus to the role of pharmacists in the pandemic," said Bradley-Baker. "Before vaccines, we emphasized that your pharmacist is still there. Pharmacies were one of the few places that were still open, so we encouraged people to contact them with any medical or medication question and reminded people to make sure to continue to adhere to their medication regimens."



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Nine months later, vaccines came out. "Because of the urgency of rolling out COVID-19 vaccines nationwide, the whole pharmacy community came together, at local, state, and national levels, to engage in major advocacy efforts, such as ensuring that pharmacists trained in immunizations could administer vaccines to anyone from pediatrics to seniors," said Bradley-Baker. (Prior to the pandemic, for instance, some states didn't allow pharmacists to give vaccines to younger patients.)

The pandemic also had a major impact on AACP's research plans. "If there was any area where we feel like we fell short, it was in our follow-up research. We did another set of surveys six months into year two of the campaign, which provided documentation of outcomes, but our follow-up plans got derailed. We were focused on keeping the site up to date with pandemic information, so our research had to take a backseat," said Bradley-Baker. "We're now at the point that we can refocus on educating the public about what pharmacists can do. Pharmacists received a lot of positive press during the pandemic, and we're working with our research partners to figure out how to merge that positive press with patterns we identify in our research."

What did AACP learn?

"When a major issue comes up suddenly—it could be something like a pandemic or even changing accreditation standards or standards of practice—it's very important to bring in a research or evaluative focus to measure aspects pertaining to your target audience or objective before the change as a baseline," said Bradley-Baker. "Then measure impact as you go through the change, and then, coming out of it, measure again. In the middle of a major disruption, we often forget about trying to measure what's happening in real time in a concrete way. Instead, we end up in reactive mode and can often rely on anecdotal information, which may not show the full range of what people are experiencing. People's stories matter, but we also have to think about what we are going to learn from major changes and how we are going to apply those learnings. Having objective measurements helps you plan for the future more effectively. COVID will not be the last society-wide public health emergency we will deal with. How can we prepare better for next time? That's what research helps us do."

6. Image source: https://pharmacistsforhealthierlives.org.

About AACP

AACP recognizes a special responsibility to provide leadership in advancing and enhancing the quality of education and training in its member institutions while respecting the diversity inherent among them.

The association includes institutional members - the 142 schools of pharmacy accredited by the Accreditation Council for Pharmacy Education - and individual members, including administrators, faculty, and staff. We represent more than 6,400 faculty, 62,500 students enrolled in professional programs, and 5,100 individuals pursuing graduate study.

The Doctor of Pharmacy (Pharm.D.) degree is awarded after completion of what is equivalent to a four-year professional degree program, following a minimum of two years of collegiate undergraduate study. Students who achieve the Pharm.D. degree must also pass the North American Pharmacist Licensure Examination (NAPLEX) and state law examination in order to engage in professional practice.

CASE STUDY
Association of American Medical Colleges: The Value of Listening

"I like to ask questions, and the more I learned, the more questions I had."

Jennifer L. Blanck, M.Ed., MSWB
Director, Constituent Engagement

The Association of American Medical Colleges (AAMC) has been fielding its annual Development Survey for a long time—more than 20 years. The survey measures various elements related to fundraising—associated expenses, impact, staffing levels—and provides longitudinal data for AAMC member medical schools and teaching hospitals and health systems.

Overseen by a core staff team of four and an advisory committee, the AAMC is constantly iterating and improving the survey instrument, process, and reporting. But when Jennifer L. Blanck, Director, Constituent Engagement, AAMC, took over management of the survey project in early 2020, the AAMC was also making bigger changes, transforming both the back-end data collection and front-end reporting to provide a better user experience (UX) for members.

"In my first annual meeting of the advisory committee, a new member questioned the value of the Development Survey, and that caught me a little off-guard," said Blanck. "Few of the committee members spoke up, and I wasn't sure how to interpret that. This survey is a heavy lift for members, taking an average of more than 16 hours to complete, so it's critical it provides them a strong return on that investment of their time."

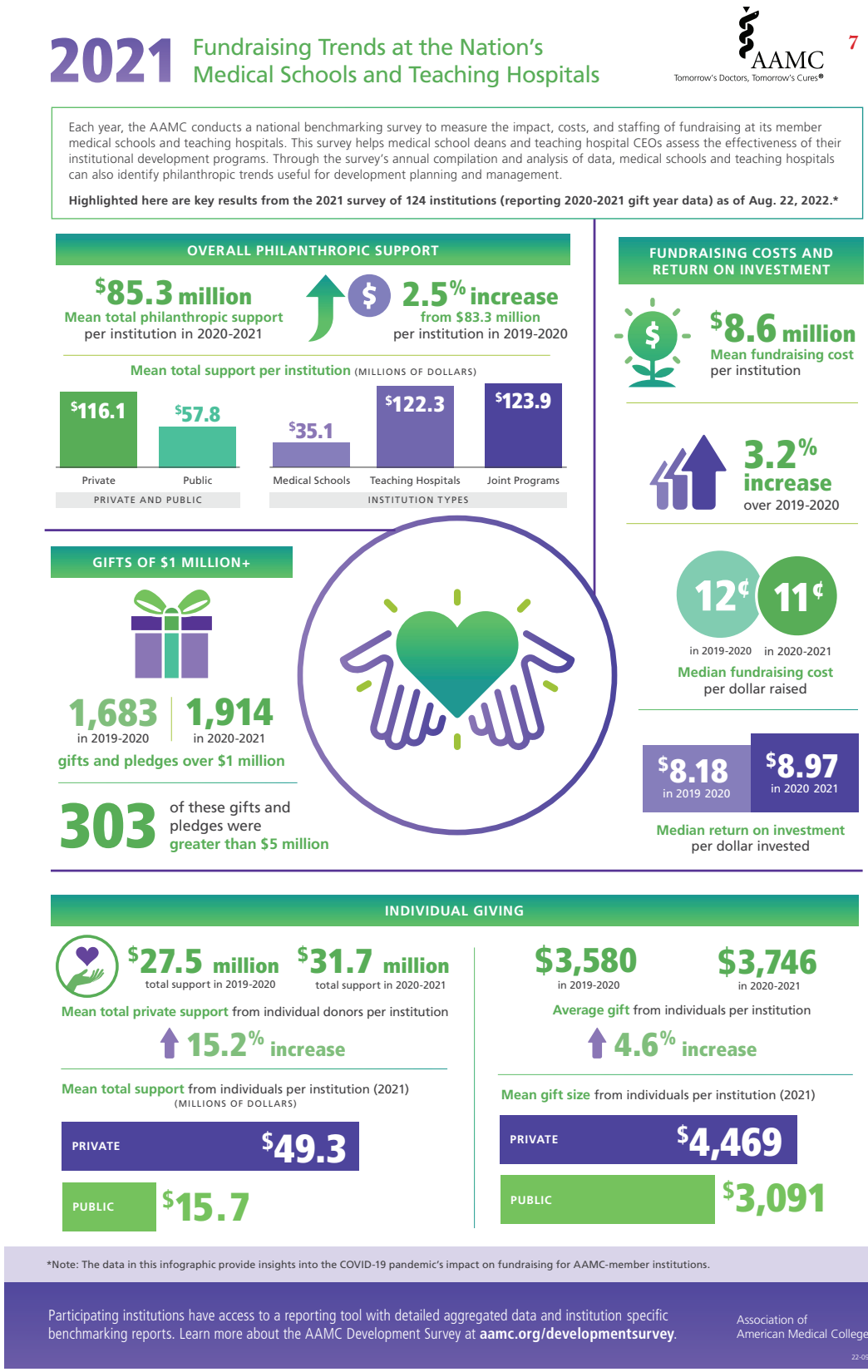
The combination of the UX work and the insightful question from the new advisory committee member presented an opportunity for Blanck and her team. "We were already making big changes to the survey, and I don't like to hear 'we've always done it that way' or to operate from assumptions. If I have questions, I want to get answers," said Blanck.

Blanck and her team decided to do exactly that.

They conducted a "listening tour," a series of one-on-one conversations with each member of the advisory committee, to develop a fuller understanding of who was using the AAMC's Development Survey and how they were using it.

"I have a background in student affairs, and one project I did in those years has particularly stood out in my mind and inspired the AAMC listening tour. I was helping students make connections with potential employers, and I ran a focus group of consultants. The consultants pointed out that what makes a candidate stand out in the interview process is not just describing how they can help the firm, but also how they can help the firm's clients. Similarly, we wanted to know not just how our AAMC members who complete the survey use it, but also how the data are used by their teams, their C-suite leadership, their board of directors, their campaign volunteers—everyone who benefits," said Blanck.

Intentionally soliciting everyone's perspective—new and experienced committee members—proved valuable. "The long-term committee members were able to provide a lot of insight on trends and institutional history of the survey, and the new members brought a fresh perspective, different questions, and new suggestions," said Blanck. "New members can be slow to speak up for a variety of reasons: They're intimidated, they want to listen and learn first before contributing, they don't want to look foolish asking an 'obvious' question they think everyone (else) already knows. Speaking with committee members one-on-one ensured that those new people were heard."



7. Infographic provided by the Association of American Medical Colleges, https://www.aamc.org/data-reports/faculty-institutions/interactive-data/2021-fundraising-data.

What did the AAMC learn from those conversations?

"We had our own ideas of how the survey data were being used, but we learned some surprising things—in a good way—about how our members were actually using the data. Different people than we thought were completing, or assisting with completing, the survey, and the output was going to audiences we hadn't envisioned. The listening tour significantly expanded our understanding of the survey's value proposition," said Blanck.

The team has also begun to compile a library of good practices related to how member institutions use the survey data.

"We post a survey report and summary infographic online, but every member who participates gets all the raw data (cleaned but not blinded), other than compensation (which is aggregate only). We learned that we need to do more education about what's in the survey results, and how users can 'slice and dice' the survey data to answer their critical questions related to effective fundraising," said Blanck. "One immediate step we've taken is at our annual spring conference for institutional advancement. We will offer a standing session on the Development Survey featuring members and how they use the data. The conference attracts chief development and advancement officers, but they also bring their teams. It gives us an opportunity to connect with other C-suite leaders, too."

What's next for the Development Survey?

"We're always tweaking the questions, of course, but we're about to do a more comprehensive review of the questions with an eye towards eliminating or combining some questions to free up space to ask about new things," said Blanck. "We're also assessing the return on investment of the staff time involved, particularly in reporting out results, so we can achieve the right balance between that and encouraging participation in the data collection. We're at a point where we need to better understand where to most effectively invest our energy as a staff team."

What advice would Blanck have for another association considering a similar research project?

"Conducting a listening tour is absolutely worth the time and effort. The payoff is huge. But it's important to go in with an open mind. Don't be defensive. You will get critical feedback, but it's because your members and volunteers support you, believe in what you're doing, and want you to be successful," said Blanck. Those initial conversations have produced a virtuous cycle where, as Blanck described, "we are hearing more and from more voices on the committee now than we ever have before. It's also important to be grateful for the insights people share—and express that gratitude—whether or not you take those suggestions. There's intrinsic value in people being heard."

For more on the AAMC story, see ***https://www.asaecenter.org/en/resources/articles/an_plus/2022/03-march/how-a-listening-tour-improved-deliverables-and-communication/***.

About the AAMC

The AAMC leads and serves the academic medicine community to improve the health of people everywhere. Founded in 1876 and based in Washington, DC, the AAMC is a not-for-profit association dedicated to transforming health through medical education, health care, medical research, and community collaborations.

CASE STUDY
Casualty Actuarial Society: Coordinating a Team Effort to Define DEI Barriers and Solutions

"Just doing the study doesn't solve anything—the work comes after."

Mallika Bender, FCAS
Diversity, Equity & Inclusion (DEI) Staff Actuary

What if the question you're trying to answer is bigger than just your association?

"We've known for many years that Black and Latino/a professionals are persistently under-represented in the actuarial field," said Mallika Bender, FCAS, Diversity, Equity, & Inclusion Staff Actuary at the Casualty Actuarial Society (CAS). A group of actuarial profession associations—CAS, the Society of Actuaries (SOA), the International Association of Black Actuaries (IABA), and the Actuarial Foundation (TAF)—had already been working together, but, according to Bender, "there was not much actual improvement, despite the work we were already doing."

In 2016, the group decided to sponsor a joint study, Barriers to Entry, that aimed to investigate barriers that may contribute to Black and Latino/a under-representation in the actuarial profession. The partnership linked actuarial organizations focused on core aspects of the research: actuarial credentialing (CAS and SOA), Black actuaries (IABA), and math education (TAF). The goal of the study was to develop a deeper understanding of those barriers so that the sponsoring organizations could take concrete action to develop the resources Black and Latino/a candidates need to successfully enter the profession.

According to Bender, one challenge the sponsoring organizations faced was "we couldn't just use our own membership and candidate communities, because part of our core research related to answering questions about who is not here, and why. We needed to talk to students who may or may not know about the profession. We also needed to talk to people who were in the process of taking exams or who took an exam but didn't enter the profession, in addition to credentialed actuaries. We needed all perspectives to understand the experiences of those who became and didn't become actuaries." Working together allowed the sponsoring associations to hire a market research firm that was able to gather insight from all these core member and nonmember audiences.

The research design also included mixed-methods approaches to gather qualitative and quantitative data from people at various stages of their journey into the profession:

- An online community site for high school and college students
- In-person focus groups with actuarial exam candidates and practicing credentialed actuaries
- Online surveys of all target groups (college first-years, STEM professionals, members who are credentialed actuaries, active candidates for certification, and former candidates)

The research began in August 2016 and concluded about a year later, with findings published in December 2017.

"Since the release of the report a little more than four years ago," said Bender, "CAS has been focusing on two key barriers that were revealed through the study: lack of awareness and late awareness of the profession. One of the biggest initiatives inspired by the findings was Be an Actuary Day (*https://www.beanactuary.org/*), which includes awareness-building events targeting high school students. These events reached a lot of students and created opportunities for us to partner with universities to help students learn about where to find actuarial science and other training programs, boot camps, scholarships, and other resources. When the COVID-19 pandemic hit, we pivoted to a virtual Be an Actuary Day. Then in February 2022, we expanded the single-day event into Be an Actuary Month to coincide with Insurance Careers Month and invited high school students from the U.S. and fourteen other countries to participate."

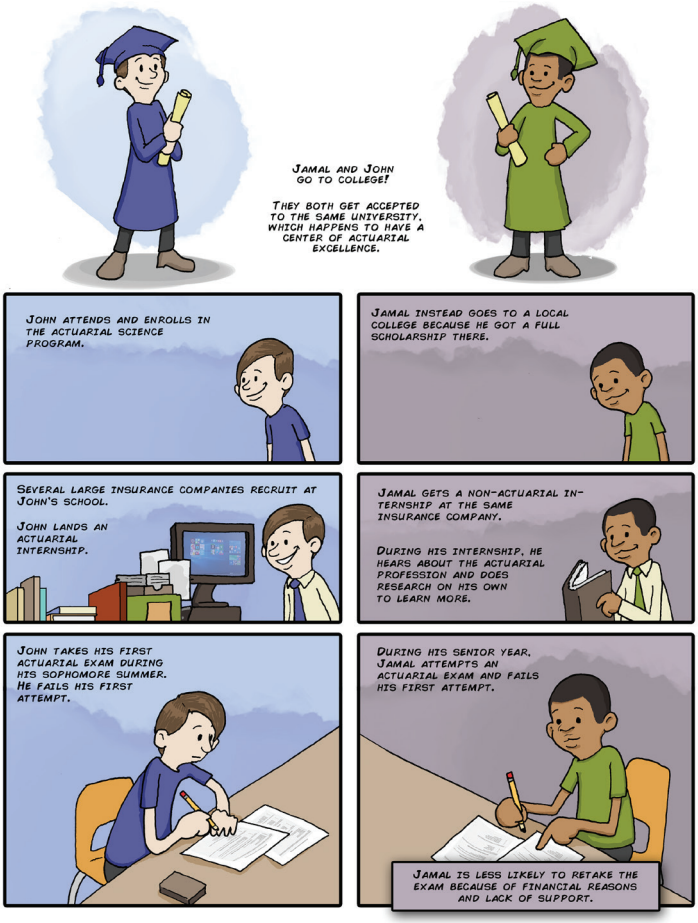
CAS also created a Barriers to Entry webpage (*www.casact.org/barriers-entry-study*), that includes an executive summary of the project, a link to an article about the study in Actuarial Review, and "A Tale of Two Actuaries," an illustrated story created by the IABA that "puts a story around metrics," showing how implicit bias can impede entry to and success in the profession.

What has been the impact of the research project?

"Overall, the study and actions we've taken in response to it have been really well received," Bender said. "We have metrics to back up what we're doing and to give us all a roadmap to DEI success. CAS staff are 100% on board and are eager to understand how they can advance DEI in their daily work in their own departments. We've also built great relationships with universities who are key DEI partners and provide first exposure to the profession and what actuaries do for a lot of students."

Bender noted that it will take some time to measure success from the activities based on the research findings.

A Tale Of Two Actuaries[8]



At least four years will pass before CAS's first Be An Actuary Day participants will even start to show up in CAS's system, and it could take as much as ten years before the first cohort will be fully credentialed.

"We have to be willing to do this for a long time, be consistent, for it to be successful. It can't just be a five-year effort," Bender stated. "It takes time to build awareness and, also, for some students, one touch point might not be enough. For some students we need to be in touch multiple times and share repeatedly how exciting a career as an actuary can be." She also noted that "the strict privacy rules about getting and keeping in touch with minors makes it hard to measure whether the high school students we work with ultimately chose to pursue an actuarial career."

8. *A Tale of Two Actuaries,* the International Association of Black Actuaries, Author: Jamala Arland, Illustrator: Jason Deeble

Were there any surprises, either in the process or the results?

"Some of the findings weren't that surprising," said Bender. "We already knew financial support and early awareness are major barriers to entry for under-represented populations, but having confirmation in the study data gives us something tangible to reference."

But some findings were surprising. "One barrier we discovered was a lack of awareness of the actuarial profession among people who support and advise students about career opportunities (e.g., parents, teachers, guidance counselors)," Bender said. "These career 'influencers' are more likely to steer students into careers and fields that they know."

The second unanticipated barrier related to failure after the first exam attempt. Bender noted, "we found that Black and Latino/a students were more likely to stop pursuing an actuarial career after failing one exam. Knowing that failure can lead to success and having support systems in place to persist are two key issues we now know we need to address."

What's next for the research project?

"We're talking about running the same study again to refresh the data," Bender replied. "The original study was very focused on Black and Latino/a candidates. It's possible we can extrapolate the findings to other populations, but we recognize that these results don't necessarily tell the full story of other specific under-represented groups." CAS is considering expanding the next phase to women and Indigenous people to understand which of these already-identified barriers apply, what additional barriers these groups face in entering the profession, and how actuarial organizations can best support them in pursuing actuarial careers.

What advice would Bender have for another association considering a similar research project?

Bender emphasized that associations doing research need to persist well beyond initial distribution of the findings. Bender noted, "one thing we're finding now, a few years down the road, is that awareness of study findings has faded over time among the actuarial community, so we released an infographic, Keys to Unlocking Diversity in the Actuarial Profession [see page *28*], earlier this year to continue to emphasize the findings. We also make sure to tie our current DEI work back to the study to keep it top of mind for our community."

Bender also stressed the importance of communication, both ensuring clear lines of communication among partners throughout the research project and leveraging the resources of all partners to share the results.

"The leaders from each sponsoring organization were talking regularly about DEI and already collaborating before the Barriers study. They continued meeting and talking at every stage of the research project," said Bender.

Casualty Actuarial Society: Coordinating a Team Effort to Define DEI Barriers and Solutions

Keys to Unlocking Diversity in the Actuarial Profession[9]

In 2018, research co-commissioned by the Casualty Actuarial Society, International Association of Black Actuaries, Society of Actuaries and The Actuarial Foundation helped define barriers facing groups currently underrepresented in the actuarial profession (e.g., Black/African American and Hispanic/Latino) and identified key tactics to enhance the diversity of the profession.

Keys to Diversity	Research Findings	Solutions
Promote Early Awareness of the Actuarial Profession	Black and Latino college freshmen surveyed were **half as likely*** to be aware of the actuarial career. Black and Latino actuarial candidates were **15% less likely*** to have learned about the profession in high school and **35% more likely*** to have begun taking exams after graduating college than others.	Hosting high school "Be An Actuary" events Expanding university outreach to minority-serving institutions and women's colleges Expanding partnerships with external organizations, like the **Organization of Latino Actuaries (OLA)** and the **International Association of Black Actuaries (IABA)**
Provide Access to Influencers and Role Models	Black and Latino candidates were **about half as likely*** to have family who helped them learn about the actuarial profession. Black and Latino members were **66% less likely*** to have heard about the profession through someone working in the field.	Increasing visibility of CAS member leaders from underrepresented groups Expanding partnerships with external organizations, like the **American School Counselor Association**
Support Enhanced Academic Preparation	Black and Latino candidates were **20% less likely*** to have taken an advanced math class in high school.	Donating to The Actuarial Foundation to fund Math Motivators Tutoring and the Modeling The Future Challenge – Underserved Engagement Initiative
Provide Access to Financial Support	Black and Latino candidates who lapsed out of the exam process were more than **4 times as likely*** to cite "couldn't afford the exam fees" as the reason.	Enhancing CAS/SOA Diversity Exam Reimbursement Program and developing new Needs-Based Exam Reimbursement Program
Support Unbiased Hiring and Career Advancement	Black and Latino members and candidates were at least **2.5 times as likely*** to have experienced or heard about discrimination based on race/ethnicity in the field.	Sharing blogs, articles and continuing education on mitigating bias in hiring and advancement and building inclusive team cultures

**as compared to White, Asian and other ethnicity groups*

Visit casact.org/barriers-entry-study to learn more about this research. Contact diversity@casact.org to learn more about this study, share ideas, and volunteer.

And when the results came out, Bender noted, "the diversity of communication styles and approaches from each sponsor was invaluable. With so many audiences who need to digest information, once you have a consistent message on results, having a large variety of ways of sharing that message is critical to success."

For more on the CAS story, see *https://associationsnow.com/article/all-things-being-equitable/*.

About CAS

The Casualty Actuarial Society (CAS) is a leading international organization for credentialing and professional education. Founded in 1914, the CAS is the world's only actuarial organization focused exclusively on property and casualty risks and serves over 9,500 members worldwide. CAS members are experts in property and casualty insurance, reinsurance, finance, risk management, and enterprise risk management. Professionals educated by the CAS empower business and government to make well-informed strategic, financial, and operational decisions.

9. Infographic provided by the Casualty Actuarial Society, https://www.casact.org/sites/default/files/2022-02/Unlocking%20Diversity%20InfoGraphic.pdf.

CASE STUDY
IEEE: Developing the IEEE DiscoveryPoint for Communications Content Portal

"Don't just do a survey because you have a person who can do that survey. Focus on what brings value to your association and your members."

Marc Beebe, CAE

Senior Director, Strategic Research, Public Imperatives, & Corporate Development

With more than 400,000 members in 160 countries world-wide, IEEE does a lot of research and has the resources to maintain an internal team of two full-time staff researchers, who work with all program areas at IEEE to help the association make evidence-based decisions, primarily through conducting survey projects that include members, conference and event attendees, and authors.

However, the Strategic Research team, under the direction of Marc Beebe, CAE, Senior Director, Strategic Research, Public Imperatives, & Corporate Development, does other types of research projects as well, including getting the opportunity to work with IEEE's Product Development (PD) team on a "stretch" project.

"IEEE produces a lot of content, so our PD team had the idea of developing a product targeted specifically at engineers in industry (as opposed to in academia) to help them make better use of the full range of content to which they have access," said Beebe. "Our first question was: What content are they using now and how are they using it?"

Beebe's team worked with an external firm to create a multi-stage research project to find out more about member engineers' goals and challenges related to IEEE content and then beta-test a solution. "Our research project involved both quantitative and qualitative phases, including surveys, an ethnographic study, focus groups, and finally a pilot study of the actual developed product," explained Beebe.

"First, we came up with a creative way to get insight into the scope of the problem. We solicited about 40 telecom engineers and asked them to take video of themselves while working, during which we provided prompts asking them to show us what they were doing and respond to a few questions," said Beebe. "One engineer showed us a huge Excel spreadsheet he maintained of all the various websites he visits to get the information he needs every day. Other engineers showed us stacks of paper on their desks or lists of PDFs on their computers."

The research team followed that up with a survey of telecom engineer members to more clearly define the problem.

Based on its findings, the PD team developed a portal (web-based service), IEEE DiscoveryPoint for Communications (***https://discoverypoint.ieee.org***), which is marketed to companies and allows engineers to access both IEEE and purchased syndicated content. While the portal was in development and testing, the research team continued to work on the financial model, surveying companies about their willingness to pay for access while also running a conjoint survey on actual pricing.

How did IEEE decide which research methods to use, and in which order?

"We generally like to mix qualitative and quantitative approaches. We had a lot of exploratory questions in the beginning, so that lent itself to starting with a qualitative approach. We followed that up with quantitative instruments (the telecom engineer member survey, pricing studies). Once we felt confident we knew what we should be building and started looking at how to market it, we turned back to a qualitative approach to get more detailed information to inform our product marketing," said Beebe.

How long did all this take?

Beebe laughed. "Nothing is quick. We knew this would take a couple of years due to all the phases and the fact that IEEE has very active, knowledgeable, and engaged volunteers, so we had to build in time for our committees to weigh in along the way. But the biggest hurdle turned out to be negotiating the contracts for syndicated content. 'How do we make this work financially in a way that benefits all parties?' was a bigger issue than we anticipated. We had to originate a model."

Were there any other surprises?

"The guy with the spreadsheet really struck me," said Beebe. "There was no easy way for him to pull together everything he needed to do his job. Our members had all these self-developed tools. If we had asked them, 'Do you have problems accessing IEEE content?' they might've said no, because they had figured out work-arounds. But those ad hoc approaches were cumbersome, slowed them down, and didn't allow consistency across a work group or company. People may not be able to tell you overtly what their problems or challenges are, even though associations ask all the time. You may have to get creative to find out."

What advice would Beebe have for another association considering a similar research project?

"We are fortunate to have significant resources we can devote to research, and we know that's unusual. When you have more limited resources, you must think carefully about what's the most valuable way to invest them," said Beebe. "Is it in a big project to develop new product that will transform the association, or is it in a series of smaller projects? You must assess what will create the most strategic value to the association. For instance, even with our relatively robust resources, we sometimes get requests that we don't think will ever be successful either due to internal silos or other barriers, so we now start potential research projects with a qualifying question: What do you need to be successful, other than understanding if there's a market or if it's something that members want?"

About IEEE

IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity. IEEE's core purpose is to foster technological innovation and excellence.

IEEE and its members inspire a global community to innovate for a better tomorrow through highly cited publications, conferences, technology standards, and professional and educational activities. IEEE is the trusted "voice" for engineering, computing, and technology information around the globe.

Bonus Content

Avoiding Antitrust Liability in Association Research Projects: An Interview with Jeff Tenenbaum

Many of our readers may already know Jeff. He has been practicing association and nonprofit law for many years, mostly recently as Managing Partner at Tenenbaum Law Group PLLC in Washington, DC, and he speaks and writes frequently on legal issues of particular concern to associations. We recently interviewed Jeff about one of the most critical topics in this arena for association research programs: antitrust liability.

Q: Why is antitrust liability such a big concern for associations?

Section 1 of the federal Sherman Act and Section 5 of the Federal Trade Commission Act prohibit certain anticompetitive agreements or conduct by two or more competitors. Associations are combinations of competitors, so one element of antitrust liability already exists just by the nature of associating.

It's important to note that some agreements are riskier than others. For instance, any time you gather information (what we refer to as "information exchanges") from members relating to prices, fees, or anything that factors into prices or fees (e.g., salaries), that's going to be much riskier—from an antitrust perspective, at least—than non-price-related information exchanges (for instance, a survey of diversity, equity, and inclusion policies).

A key question to ask any time you're doing research about the profession or industry your association serves is: Are there numbers involved in this research project? Anything that includes numbers is more likely to have an impact on prices, which almost always involves more risk. Of course, this is not the only benchmark of potential antitrust risk.

I am frequently asked to monitor board of directors and committee meetings for antitrust violations, and a good practice is to make a statement up front that participants can't talk about prices, fees, salaries, and the like, along with other potentially antitrust-problematic topics (such as group boycotts, market allocation, bid-rigging, and output restrictions). Basically, you want to shut those conversations down before they even begin by setting rules of engagement that prohibit those kinds of discussions in any manner.

Q: What are the most common antitrust violations?

In many respects, the most severe–or at least the most likely to be prosecuted—antitrust violation is price fixing, which, per the FTC, "is an agreement (written, verbal, or inferred from conduct) among competitors to raise, lower, maintain, or stabilize prices or price levels."[10]

While conducting a survey on prices doesn't necessarily mean members will agree on prices to be charged, it's risky because it could facilitate a price fixing agreement among competitors—which, by the way, doesn't have to be a formal written or oral agreement to constitute an antitrust violation. Pricing fixing can occur as a "wink and a nod" understanding that's inferred from conduct amongst competitors.

Other common antitrust violations include:

- *Group boycotts,* where businesses agree as a group not to do business with a particular company(ies) or individual(s). We most commonly see this accusation made in an association context when a member is kicked out of or denied entry to the association, an exhibitor is kicked out of or denied entry to the trade show, or a company or individual is denied or loses accreditation or certification.

10. https://www.ftc.gov/advice-guidance/competition-guidance/guide-antitrust-laws/dealings-competitors/price-fixing

Tenenbaum Interview Cont'd

- *Market allocation,* where businesses agree to divide up markets so that they don't compete with each other.
- *Bid rigging,* where businesses collude to ensure that a particular company wins an ostensibly open bidding process.
- *Output restrictions,* where businesses agree to limit production of goods or services.

One of the key differences is whether something is a *per se* violation—that is, whether it's automatically a violation, irrespective of the justification for or effect of the competitive restraint. Price fixing is *per se* violation. It's automatically illegal, even if businesses conspire to lower prices.

On the other hand, most other violations are analyzed according to a principle called the "rule of reason."

For example: Let's say an association kicks out a member for violating its code of ethics. Now, this could cause competitive harm, but the association also might have good reasons for terminating that membership. The question becomes: Did the association have a pro-competitive reason for taking that action? Reasons such as promoting fair and honest business practices, discouraging false and deceptive marketing and advertising, promulgating standards that facilitate interoperability, or protecting consumer health and safety or environmental protection. The U.S. Supreme Court precedent says that you must balance pro-competitive benefits against anti-competitive harm, and if the benefits outweigh the harm, there's no antitrust violation in a rule-of-reason analysis.

Q: Where do associations most commonly go wrong?

The biggest problem for associations that get into antitrust trouble is, in my judgment, for lack of a better term, naivete. Antitrust violations are often not "I know it when I see it" intuitive, so staff and volunteers may accidentally venture into dangerous territory unaware. For instance, we're in a period of high inflation, and an association might be curious about what members intend to charge for a particular product or service in the coming months to try to track the impact of inflation on the industry or profession, so they decide to field a survey. The thing is, you can't ask about information like that.

Q: Are there "safe harbor" guidelines that, if associations follow them, should help prevent antitrust liability in connection with association information exchanges and benchmarking studies?

Absolutely. Safe harbor guidelines were promulgated jointly by the U.S. Department of Justice's Antitrust Division and the FTC, with the most recent iteration coming out in 2000, and they're generally honored by all 50 states and the District of Columbia, who, for the most part, have modeled their antitrust laws and enforcement after the federal laws.

There are five key elements:

1. Engage a third party (either staff or an outside vendor) to manage the process. Only that third party may see any raw data. No industry participants may be involved in the data collection process or see any raw data.
2. Make the aggregated and scrubbed data available to everyone who participated in the research project, at a minimum, and potentially to other interested parties. This is a common practice in associations, where many associations conduct regular industry surveys that are published and made available publicly.
3. Ask for past data only. This element is very important, particularly for any data involving numbers. Any price or wage data should be at least three months old at the time survey participants submit it. Do not ask for current data or future projections. Ever.
4. Ensure enough participants that no one can identify any particular member who supplied data from the aggregated data. You should aim to have at least five different competitors in every category or segment you ask about, and no one participant's data should comprise more than 25% of total data in that category or segment.
5. Participation must be voluntary.

Tenenbaum Interview Cont'd

Finally, and this is not part of formal guidance, but it is important: Do not allow unregulated discussion of survey results. If your members get together around a table in a boardroom or in an online community and start talking about your survey results, make sure you have an attorney knowledgeable about antitrust law monitor those discussions, and with an understandable antitrust warning read at the outset.

If you don't comply with all the safe harbor elements, it's not automatically an antitrust violation. Associations sometimes make informed decisions to specifically not comply with a particular prong of the safe harbor guidelines for specific reasons related to particular projects, but if you're going to do that, definitely consult with knowledgeable legal counsel first.

I should also note that, with certain exceptions, there generally isn't much federal or state regulatory enforcement of the antitrust laws in this area. Most enforcement comes from lawsuits brought by private plaintiffs (such as an aggrieved competitor or someone denied certification). Of course, your legal counsel's job is to keep you out of both kinds of trouble, irrespective of the likelihood of enforcement.

Q: If you could change one thing about the ways associations conduct and present research to protect them from antitrust liability, what would it be?

The most important thing for associations is to make sure anyone on staff who deals with association research knows the antitrust safe harbor rules.

In my experience, the most common antitrust risk in the association community results from lack of knowledge, so be educated!

Developing Discernment About Research: An Interview with Joyce E.A. Russell, Ph.D.

"People think a lot of research skills are common-sense and anyone can do it, especially with many free and accessible online survey tools. The truth is that not everyone can do high-quality research."

Joyce E. A. Russell, Ph.D.
The Helen and William O'Toole Dean
Villanova School of Business

We are long past the point where data-driven decision making and "Big Data" can be considered new. Association professionals use data and research in every department, every day.

In fact, association executives may find themselves in an "accidental researcher" role, tapped to lead a research program and with no or little formal research-related training or education. ASAE has reported that only 16% of trade and professional associations surveyed have even one staff member devoted to research.[11]

We recently had the opportunity to speak with Joyce E. A. Russell, Ph.D., The Helen and William O'Toole Dean of the Villanova School of Business, where she also serves as Professor of Management. Dr. Russell writes a regular column for *Forbes* offering career guidance for professionals facing challenges and opportunities on the job or on the job market. We interviewed Dr. Russell to learn how professionals with limited research training can navigate consuming and producing research responsibly and overcome skills gaps.

Q: What should we look for, or look out for, in research that we use or produce?

Good research is based on well-established scientific methods. As a consumer, you should approach any content, data, or research report with a critical eye. Use your information literacy skills. Investigate the study's methodology. How was the data collected? Who was included in the research? Who was it collected by? Be careful of your sources—investigate whether they are reputable. Are they drawing conclusions without data to support them?

Research reports should include a methodology section with details like the objective of the research, who was involved in framing the research, questions the research sought to answer, research methods, and sampling approaches.

Q: What if research isn't exactly right?

The implications are huge. Organizations use research to drive many important decisions, and flawed research can have significant consequences. For instance, in human resources, surveys are used to evaluate people much of the time. In a performance review with inappropriately designed questions, the data may indicate that a person is not fit to do a particular job or task, when in truth they may be fine. If questions were slanted to lead to responses that weren't a fair approach, this could impact that person's future.

Q: What advice would you have for association executives who lead or contribute to research projects, but don't have research expertise?

Anyone doing research needs to focus on creating a research program that leads to an honest and fair assessment and uses appropriate evaluation techniques. I would say that they want to make sure the research is comprehensive, that the sampling approach is designed to include people from all groups relevant to the research questions.

You should also take care with the types of questions you ask and the language you use. How you set up questions makes a huge difference in avoiding poorly constructed, leading, or priming questions.

11. *Benchmarking in Association Management: Publications and Research Policies and Procedures.* Washington, DC: ASAE: The Center for Association Leadership, 2013.

Russell Interview Cont'd

Be careful to avoid going into surveys with a predetermined perspective, otherwise you may draft questions that lead respondents to appear (inaccurately) to support the same perspective. If you're not expert, make sure you have someone else look over your questions. Get another perspective, ideally from someone with a contrary view, to ensure fair and unbiased question language. Draft questions and look at data for any confirmation bias (confirms opinion we already have). Beware of swaying people in a particular direction, and make sure your research is done in a fair and comprehensive fashion.

So much research is done poorly because people don't know how to do survey construction well. They don't know how to ask questions or construct valid responses and scales (e.g., Likert scales). It is worth taking survey research courses to expand your knowledge.

Editor's note: As Dr. Russell noted in a recent column for *Forbes,* data analysis skills are particularly critical for recent graduates who are trying to differentiate themselves. "As one manager recently noted to me, 'There are plenty of sharp new employees with strong technical skills; I want someone who can explain what is going on in the data to my team so we understand the issues.'"[12]

12. https://www.forbes.com/sites/joyceearussell/2022/05/08/graduates-heres-how-to-stand-out/

Bonus Content

Ethical Practices in Research: An Interview with Sharon E. Moss, Ph.D., CAE

"We must never lose sight of ensuring that sound ethical practices permeate every aspect of association research activity, whether conducting or consuming research."

Sharon E. Moss, Ph.D., CAE
President and Chief Research Officer
ASAE Research Foundation

We recently had the opportunity to speak with Sharon E. Moss, Ph.D., CAE, President and Chief Research Officer of the ASAE Research Foundation, about principles of ethical research that everyone in the association management sector should understand. In addition to her role at the ASAE Research Foundation, she is coauthor of *The Informed Association: A Practical Guide to Using Research for Results.*

Q. What basic principles of ethical research should associations know?

We're fortunate in that we don't have to start from scratch. The association community can draw from well-established practices in the broader scientific community that are designed to foster research integrity and responsible, honest, and objective research behavior. A good place to start is the U.S. Office of Research Integrity (ORI) which has defined the key common domains of responsible conduct of research:

- Protection of human subjects
- Welfare of laboratory animals
- Conflicts of interest
- Data acquisition, management, sharing, and ownership
- Mentor-trainee responsibilities
- Collaborative science
- Authorship and publication practices
- Peer review
- Research misconduct

ORI Domains of Responsible Conduct of Research[13]

Human Subjects	Refers to the issues and regulations relevant to conducting research involving human subjects
Animal Welfare	Refers to the issues and regulations relevant to conducting research involving animals
Conflict of Interest and Commitment	Refers to the process researchers should follow when their interests are or appear to be in conflict, as well as the types of conflicts researchers and institutions may encounter
Data Acquisition, Management, Sharing and Ownership	Refers to accepted practices for how researchers should acquire, maintain, protect, and share research data

13. Reproduced by permission from Sarah Slater, MS, and Sharon Moss, Ph.D., CAE, *The Informed Association: A Practical Guide to Using Research for Results* (Washington, DC: Association Management Press, 2013), pg. 161.

Moss Interview Cont'd

ORI Domains of Responsible Conduct of Research Cont'd

Mentor/Trainee Responsibilities	Refers to the roles, responsibilities, collaborations, and potential conflicts of the mentor (investigator) and trainee (student)
Collaborative Science	Refers to issues and responsibilities that arise when researchers work with colleagues within the same discipline, in other disciplines, at other institutions, and/or in other countries
Publication Practices and Responsible Authorship	Refers to the purpose and importance of scientific publication, as well as the responsibilities researchers have when disseminating research findings
Peer Review	Refers to the responsibilities researchers have when they review the work of other researchers in order to evaluate merit for research funding, publications, and/or use of research
Research Misconduct	Refers to the definition of misconduct, the policies and guidelines that govern misconduct, the procedures for reporting and investigating misconduct, as well as the protections for those who report and/or are accused of misconduct

(You can find further explanation of each domain available for free on the ORI website *https://ori.hhs.gov/ori-introduction-responsible-conduct-research*).

Though these are primarily applicable to behavioral and biomedical research, many of the ORI principles are relevant to the research conducted by association professionals. For our purposes, domains that should be at the forefront of our minds are conflict of interest, data management, authorship and publication, peer review, and, of course, research misconduct.

These domains are particularly relevant to associations for two reasons. First, it is critical that association executives create and maintain a culture of responsible conduct of research. Failure to do so leads to negative outcomes like diminished credibility for both the research in question and potentially the association overall, questionable reliability and validity of results, violation of public and professional trust, and compromised ability to obtain future research participation.

Secondly, and perhaps more importantly, we do research on and with people. (The term in the sciences for this is "human subjects research.")

Again, we can turn to the sciences for guidance. The Belmont Report (1978) and the related 2018 Common Rule update provide three broad principles for appropriate treatment of human subjects involved in research:

1. Respect for persons
2. Beneficence
3. Justice

Under the "respect for persons" principle, investigators must protect the autonomy of research participants by obtaining informed consent for voluntary participation, thereby protecting their right to make decisions for and about themselves without undue influence or coercion to participate in or withdraw from research.

The beneficence principle relates to the ethical obligation to maximize benefits and to minimize any potential or predictable harm and risk of participating in the research.

Moss Interview Cont'd

The justice principle deals with the ethical requirement to treat each person in accordance with what is morally right and proper and to give each person what is due to them by fairly and equitably distributing benefits and risks without prejudice to particular groups or individuals, such as vulnerable populations.

Q. Are there guidelines or approaches for ethical treatment of research participants that associations should follow, that reflect established practices of responsible conduct of research? What are they?

Researchers need to accurately inform potential participants about the purpose of the research, the procedures that will be followed, and the potential risks, benefits, and alternative methodologies of the research. Researchers also need to make sure their potential subjects understand the information they're receiving and make sure potential subjects are able to make a voluntary, uncoerced decision about joining (or continuing to participate) in the research activity.

Some human subjects research conducted by associations may be subject to an independent review. This review is done by either an internal or external Institutional Review Board (IRB), which is a team of people who are unaffiliated with the research and have no direct financial or material benefit from the outcome of the research. Some organizations and external research firms may have an IRB conduct a preliminary review of all research projects as standard procedure to determine if a full human subjects review is needed.

Q. What advice would you have for association professionals who are seeking to protect the integrity of their research program?

Association professionals should establish and continuously update policies and practices that address every phase of research:

- *Establishing the value of the research* (i.e., research will enhance knowledge, expected results will be valuable enough to justify potential imposition and inconvenience to participants)
- *Supporting scientific validity* (i.e., research is asking sound questions and uses valid study protocols, as research lacking methodological rigor unethically exposes participants to potential risks and could lead to inaccurate findings)
- *Maintaining respect for potential research participants* (i.e., research respects, protects, and is fair to the participants; ensures informed consent and confidentiality; includes independent review by IRB as appropriate)
- *Selecting research subjects* (participants) in a fair and equitable way (i.e., research recruitment/sampling strategy – which groups are included or excluded – is determined by the research objectives, not by ease of access, and by standard sampling approaches aligned with research design/method)
- *Managing data securely and appropriately* (i.e., secure handling of data from collection to data analysis/interpretation to reporting results in publications and presentations; communicating policy on data ownership when establishing research partnerships; putting practices in place to ensure secure maintenance, storage, access, and destruction of data)
- *Analyzing and interpreting data accurately* (i.e., define the analysis plan before any data collection begins, follow this analysis plan when evaluating results, provide clear interpretations of findings, use standard practices to identify, address, and avoid bias and statistical errors and to safeguard against falsification of data)
- *Reporting and presenting results* (i.e., all research reports and presentations of findings/data should reinforce the integrity of the research; should be true and accurate; should communicate findings clearly and concisely to target readers/audiences; and give proper attribution to the ideas, work, or material of others. Reports should include background about the research including study design, methodology, sample approach, response rates, confidence level, citations to referenced work, ideas, or material, etc.; and presentations should provide links to full/formal reports and research background details. Be mindful of what constitutes falsification, fabrication, and plagiarism in any written report or presentation of research)

Moss Interview Cont'd

And, of course, the policies are only half the battle. Association executives also need to institute standardized processes and procedures and an audit process to make sure the policies, processes, and procedures are understood and are being followed consistently by everyone involved in the research program, including internal staff, volunteers, and third-party partners. *The Informed Association* offers additional guidance about research policies and practices specifically for associations and the types of research, populations, and issues we study.

The credibility of association management as a profession, and of the professions and industries we represent, depends in part upon the caliber and integrity of research we conduct, as we use that research to drive decisions, inform our constituents, and to advance the body of knowledge for the professions and industries we serve.

While conducting research isn't the responsibility of every association executive or staff person, it is the responsibility of all association professionals to understand the basic principles of ethical research. We should all expect and, indeed, insist that research is conducted in an ethical environment that promotes objective inquiry and that ethical principles are upheld throughout the continuum of any research project, from design to execution, dissemination, and beyond.

For more on this topic, see also the ASAE Research Foundation publication *Responsible Conduct of Research: The Roles Associations Play in Promoting Research Integrity*.

Editor's note: Although Dr. Moss was President and Chief Research Officer of the ASAE Research Foundation at the time of our interview, she has recently left this position.

Bonus Content

Fun With Formal Logic

Why are bad arguments bad?

Well, what makes for a good argument?

A good argument is constructed from premises that, if they are true, mean that the conclusion based on those premises is also true. A good argument also establishes a conclusion that was previously in doubt.

Bad arguments are arguments that are based on fallacies related to those premises.

It's tempting to throw around the term "fallacy" when what we really mean is that something is false. A fallacy isn't just something that's not true; it's a flaw in reasoning.

There are three main types of fallacious reasoning:

- *Inconsistency fallacies,* where your premises can't all possibly be true at the same time.
- *Begging-the-question fallacies,* where your premises aren't proving anything because they're already assuming that the conclusion is true (also commonly referred to as "circular reasoning").
- *Non sequitur fallacies,* where your conclusion doesn't follow from the premises.

A simple example of a fallacy of inconsistency is a person who claims to be a vegan while eating a steak. (Obviously, vegans don't eat red meat.)

The classic example of begging the question is: "Mr. Jones, have you stopped beating your wife yet?" (There is no way for Mr. Jones to answer this without impugning his own character.)

A good example of a non sequitur fallacy is sports superstitions. Elizabeth wore her Malcolm Jenkins jersey and the Philadelphia Eagles beat the Dallas Cowboys; therefore, Elizabeth wearing that lucky #27 jersey CAUSED the Eagles to win. (Just to be clear, Elizabeth is still going to wear that shirt to the next game, even if it is just a correlation and Malcolm Jenkins has retired from the NFL.)

Why does this matter? After all, just as we're not expecting all our readers to change careers and become full-time researchers, we're also not expecting you to become experts in formal logic.

It matters because these same sorts of errors can creep into the conclusions we draw from research projects and the ways we report those conclusions.

Non sequitur fallacies crop up in research projects all the time, when we see correlation and assume causation (in the colloquial sense).

For instance, let's say you look into the pre-joining behavior of new members and discover that many of them attended a particular webinar your association produced. Does that mean that the webinar itself alone caused those new members to join? If you give that webinar again and invite a bunch more nonmembers to participate, they will also join? Not necessarily, though for marketing purposes it would be worth an experiment (thus illustrating why marketing is often more art than science).

Begging-the-question fallacies often show up in question design, where the question is constructed in a way that assumes a particular conclusion.

For instance, let's say your post-conference survey asks: "How satisfied were you with the venue?" This is a little subtle, because presumably dissatisfied attendees could choose a low rating. But you are signaling to them that they should be satisfied, that you're assuming that they're satisfied, and that their only job is to tell you how much they liked the venue, on a scale of "it was awesome" to "IT WAS AWESOME!!!!" (A better phrasing would be: "Please rate the conference venue.")

Fun with Formal Logic Cont'd

Inconsistency fallacies can occur when we're trying to make sense of large amounts of data from a variety of sources and tell one integrated story.

For instance, you could interview people who hold your association's certification and ask them about cost, and they might report that they are price-sensitive. Yet your certification department has data demonstrating that when you raised the cost of your certification significantly three years ago, it had no impact on how many people choose to earn or maintain the certification. How can you tell a story where those two things are true at the same time? (It's likely there is a confounding factor, i.e., individual designees are price-sensitive for things they pay for out of pocket, but perhaps employers commonly pay for the certification process in the industry or profession your association serves.)

Being aware of common logic flaws and how they can creep into the phases of your research project can help keep you alert so you can identify when that's happening and take steps to ameliorate it.

For more on this topic, see *The Elements of Logic* by Stephen F. Barker, particularly chapter 6: Fallacies.

Bonus Content

Upping Your (Research) Game

Like many who attend business school, Polly pursued her MBA with no intention of becoming a CFO or accountant herself. Rather, as a (die-hard) association professional and CAE, she wanted to deepen her business administration knowledge and skills and enhance her ability to work well with the CFO and other experts.

Similarly, you can benefit from "upping your (research) game" to deepen your knowledge of statistics and research methods and enhance your ability to work with professional researchers.

We've put together a list of resources to help you to dive deeper into research design, methods, analysis, and dissemination.

Pro tip: Start by asking research experts in your organization and network about their favorite research resources.

(Some additional recommendations from Marc Beebe of IEEE are marked by an asterisk.)

Books and Articles

Doing Science: Design, Analysis, and Communication of Scientific Research by Ivan Valiela (SAGE, 2009). Practical guide to each stage of research, in readable narrative style.

Research Methods: The Essential Knowledge Base by William M.K. Trochim, James P. Donnelly, and Kanika Arora (Cengage Learning, 2016). Comprehensive textbook using clear and engaging language. See also Trochim's website, listed below.

Making Numbers Count: The Art and Science of Communicating Numbers by Chip Heath and Karla Starr (Avid Reader Press, 2022). Quick read on why and how to present data in compelling and meaningful ways.

SAGE Dictionary of Statistics & Methodology: A Nontechnical Guide for the Social Sciences by W. Paul Vogt and R. Burke Johnson. (SAGE, 2016, 5th edition). Reference tool that provides concise definitions of statistical and research-related terms and relevant examples. At 500+ pages, consider the Kindle edition for anywhere accessibility.

The Informed Association: A Practical Guide to Using Research for Results edited by Sarah C. Slater and Sharon Moss. (ASAE, 2013). Association-specific guide covering the why, what, and how of association research.

Responsible Conduct of Research: The Roles Associations Play in Promoting Research Integrity by Patrick Glaser, Samantha Dina, and Sharon Moss (ASAE: 2015). ASAE report on ways associations encourage ethical research practices among members/stakeholders as well as in their own internal association research activities.

Harvard Business Review. Specific collections of recent research-related articles, typically brief, accessible, and oriented towards concerns relatable to associations:

- Analytics and Data Science: ***https://hbr.org/topic/analytics-and-data-science***
- Decision Making and Problem Solving: ***https://hbr.org/topic/decision-making-and-problem-solving***
- Data and Visuals: ***https://hbr.org/data-visuals***

Websites and Podcasts

*Storytelling with Data:
https://www.storytellingwithdata.com/
Resource on communicating your results effectively using charts and graphs.

Research Methods Knowledge Base:
https://conjointly.com/kb/
Free online textbook written by Professor William M.K. Trochim (Cornell University) in language accessible to nonexperts which addresses topics typically covered in university-level social research methods courses.

*Harvard Data Science Review podcast:
https://hdsr.mitpress.mit.edu/podcast
A non-technical program covering a variety of data science topics, from choosing wine to identifying bias in algorithms.

Upping Your (Research) Game Cont'd

UConn Educational Research Basics:
https://researchbasics.education.uconn.edu/
Free, introductory educational research course material covering basic to advanced topics generalizable to associations and presented in clear, simple language.

*R Project for Statistical Computing ("R"):
https://www.r-project.org/
Free, incredibly powerful statistical tool that's a good choice for people who want to learn how to do statistical analysis and need something more sophisticated than Excel, but don't have a budget. To learn how to use it, check out the *R for Journalists* (***https://learn.r-journalism.com/en/***) tutorial and tons of free resources through LinkedIn Learning (***https://www.linkedin.com/learning/***).

Statistics How To (Experimental Design):
https://www.statisticshowto.com/experimental-design/
Free educational resource to help undergraduates learn basic and advanced statistics created by Professor Stephanie Glen (adjunct professor of mathematics, Jacksonville University and Florida State College at Jacksonville). Also covers SPSS, Minitab, Excel, and other popular technology for stats.

Training

Joint Program in Survey Methodology:
https://jpsm.umd.edu
Initially a federal workforce training program, JPSM offers research methods and statistics courses (in-person/online) to degree- and non-degree-seeking students. Classes are hosted by University of Maryland (UMD) and taught by faculty from UMD, University of Michigan, and Westat. JPSM offers individual online courses, short courses, and online certificate programs.

Coursera: ***https://www.coursera.org***
Free and paid access to online training at all learning levels from 200+ leading universities and companies on a vast array of research methods, statistics, and specialized topics, delivered as single courses and certificate- or degree-granting programs. Relevant, highly-rated courses include:

- ***Understanding Research Methods***
- ***Survey Data Collection and Analytics Specialization***
- ***Framework for Data Collection and Analysis***
- ***How to Create a Program Evaluation for Your Non-Profit***
- ***Introduction to Statistics***
- ***The Data Scientist's Toolbox***
- ***Data Visualization with Tableau Specialization***
- ***Research Design: Inquiry and Discovery***

*LinkedIn Learning:
https://www.linkedin.com/learning/
Large library of general research methods courses, training on specific statistical methods, and technical training in programs like Tableau, designed for busy professionals. Free trials offered, otherwise requires a subscription. Relevant courses include:

- ***Statistics Foundations: The Basics***
- ***Introduction to Data Science***
- ***Data Fluency: Exploring and Describing Data***
- ***Presenting Data Effectively to Inform and Inspire***

Note: LinkedIn Learning has partnered with many public libraries. If you have a library card, you may be able to access some of their materials for free.

Khan Academy: ***https://www.khanacademy.org***
Free practice exercises, instructional videos, and a personalized learning dashboard to learn at your own pace. Statistics and Probability section (***https://www.khanacademy.org/math/statistics-probability***) covers wide range of topics like how to summarize qualitative data, study design, sampling and observational studies, bias, and correlation and causation.

Disclaimer: As a former Westat employee, Polly Karpowicz holds a small number of shares in Westat, an employee-owned company, through its employee stock ownership plan (ESOP) benefits program.

Questions for Reflection

- What are some of the ways research informs your work and decisions as an association professional?
- What internal or external sources of data and research do you and your colleagues use to develop, monitor, and evaluate your association's programs, products, and services? What sources do you rely on for insight about your members and other stakeholders? About the profession or industry your association serves? How do you and your colleagues decide which sources are reliable and/or applicable?
- What are all the current internally focused research projects your association regularly takes on? (Make sure to talk to every department or program area.) Are there opportunities to work across departments to streamline processes or produce more insightful results?
- What else would you like to know about your members and other audiences? Which departments or programs have existing data or access to sample populations that may help answer these questions? What type(s) of projects could you undertake to gain this insight?
- What are all the current externally focused research projects your association regularly takes on? Are there opportunities to collaborate with components, affiliates, or special interests within your association community and/or with outside organizations to increase your research capacity or the reach and impact of your project(s)?
- What else would your members and other stakeholders like to know about their industry or profession? What data or insight already exists within your association or from external sources (e.g., from federal government, industry sources, etc.)? What type(s) of projects could your association undertake to answer their questions? Are there outside organizations who would be valuable partners in that work?
- Who uses your association's research and data? How do they use it? Who doesn't use it, and why not? Where can you create opportunities to gain regular feedback about your association's research from those who use it, or don't?
- How are decisions made about which research your association pursues? Who is involved in those decisions? Who is not? Are there additional opportunities for your association to engage staff, members, volunteer leaders, and other stakeholders in each stage of research in appropriate and meaningful ways?
- What steps are you currently taking to identify and minimize bias in your research projects? What more could you be doing? Look at past research you've conducted. Is there evidence of biases that you need to directly address when designing future research projects?
- What policies and practices does your association have in place to promote responsible conduct of research? (See our interview with Dr. Sharon Moss on page ***35*** for examples.) Do they support each phase of research? Are they regularly reviewed and updated? Who needs to know about them (e.g., staff, consultants, volunteers)? How do you verify that these policies and practices are understood and followed?
- Are most of your research projects designed as single-method or mixed-methods research? What additional speed could you gain from moving to a single method (in cases where that's important)? What additional insight could you gain from moving to mixed methods?
- Who can you rely on to provide honest feedback about your research instrument to help you avoid things like leading or double-barreled questions, poorly constructed response options, or confusing or jargony language? Would it be worthwhile to work with a third party or dedicated research professional to vet your survey design and/or research instruments?
- What research approaches and/or concepts would you like to learn more about? How deeply do you want to dive into extending your knowledge? Would learning on your own suffice (e.g., by reading articles or books), or would you rather learn directly from an expert? (Check out **Upping Your (Research) Game** on page ***41*** for resources on extending your knowledge.)

Additional Resources

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About Polly Siobhan Karpowicz

Polly Siobhan Karpowicz, MBA, CAE, is an association consultant with more than 25 years of association management experience. She has leveraged her expertise in association research, publishing, communications, marketing, membership, and technology for a variety of associations, and draws upon knowledge gained through various professional, leadership, and volunteer roles she's held over the course of her career. Regardless of the her role, Polly asks critical questions—What do members and stakeholders really [say, think, need, etc.]? and How do we know this is true?— to guide associations toward insight-driven, constituent-oriented discovery and innovation.

Recently, Polly served as Director of the Center for Association Services at Westat, Inc. for five years. She worked with a range of professional and trade associations and nonprofits to develop robust, tailored qualitative and quantitative research programs, including ASAE's Impact Every Day research. In this role, she enabled the association sector to benefit from Westat's formally trained research experts and extensive research capabilities as one of the world's leading research firms.

Prior to joining Westat, Polly served as Director of Publishing and Communications at the American Political Science Association for a decade. In the seven years prior to that position, she played supporting and senior roles at APSA, in education, professional development, institutional membership, research, international and diversity programs. She launched her career in association management by "happy accident" after college and is grateful for the wonderful opportunities and colleagues she has met along the way.

Polly is an active member of various associations and nonprofits. As a volunteer, she recently served two terms as a member of ASAE's Research Committee and served as chair of ASAE's national study on the role of associations in workforce development.

Polly is a certified association executive (CAE) and holds an MBA from the University of Maryland and a BA in Political Science and History from Saint Mary's College (Notre Dame, Ind.).

About Elizabeth Weaver Engel

Elizabeth Weaver Engel, M.A., CAE, chief strategist at Spark Consulting LLC, has more than 25 years of experience in association management. Though her primary focus has been in membership, marketing, and communications, her experience has been wide-ranging, including corporate sponsorship and fundraising, technology planning and implementation, social media and internet strategy, budgeting, volunteer management, publications, and governance.

Spark provides strategic membership and marketing advice and assistance to associations that have the willingness and capacity at both the staff and board levels to ask themselves tough questions and take some risks in service of reaching for big goals. Forget settling for incremental growth by making minor changes to what you're doing—we're going to uncover and solve the root problems that are holding your association back!

Elizabeth combines a focus on asking the right questions and finding and implementing creative solutions with a broad understanding of the association sphere. Throughout her career, she has excelled at increasing membership, revenue, public presence, and member satisfaction while decreasing costs through a focus on the efficient and effective use of data, staff, and technology to serve organizational goals and constituents.

Prior to launching Spark, Elizabeth consulted in online campaigns and marketing and internet and social media strategy for Beaconfire Consulting (now Allegiance Group) and in a wide range of subject areas in association management in the not-for-profit consulting practice at RSM McGladrey, Inc. (now RSM US). She has also served associations directly in a variety of positions, including director of member services and IT, director of marketing and sponsorship, vice president of marketing, and acting CEO.

Elizabeth is a certified association executive (CAE) and holds a master's degree in government and foreign affairs from the University of Virginia.