

Conducting a Quality Survey Research Project



ASSOCIATION FOR INSTITUTIONAL RESEARCH
Data and Decisions for Higher Education

Welcome to AIR's webinar series on conducting a quality survey research project – thank you for attending!

Presented by:



Darlena Jones, Ph.D.

*Director of Assessment and Research
Association for Institutional Research*



My name is Darlena Jones and I am the Director of Assessment and Research for the association. I have spent the past 20 years conducting survey research projects. I have learned a lot over those 20 years and have made my share of mistakes. Hopefully you can learn from my mistakes.

Housekeeping

We welcome questions! Please use the “Questions” section of the GoToWebinar control panel.

Slides available in the “Handouts” section

Webinar is being recorded and will be available

Please respond to the evaluation when you receive it via email. We appreciate your feedback!



Before we begin, we have a few housekeeping items to discuss. First, your microphone will stay muted throughout the webinar but if you would like to ask me a question, please type your question into the “Questions” section of the GoToWebinar control panel and click “Send”. I will receive those questions and answer as we time.

Second, if you would like a copy of the slides, please click on the “Handouts” section of the GoToWebinar control panel and download the file.

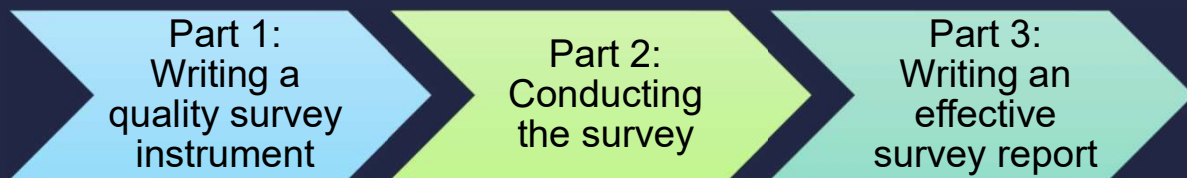
Next, this webinar is being recorded and will be made available.

And, finally, at the end of this webinar, you will receive an email to a short survey asking for feedback about the webinar.

Two-Part Webinar Series

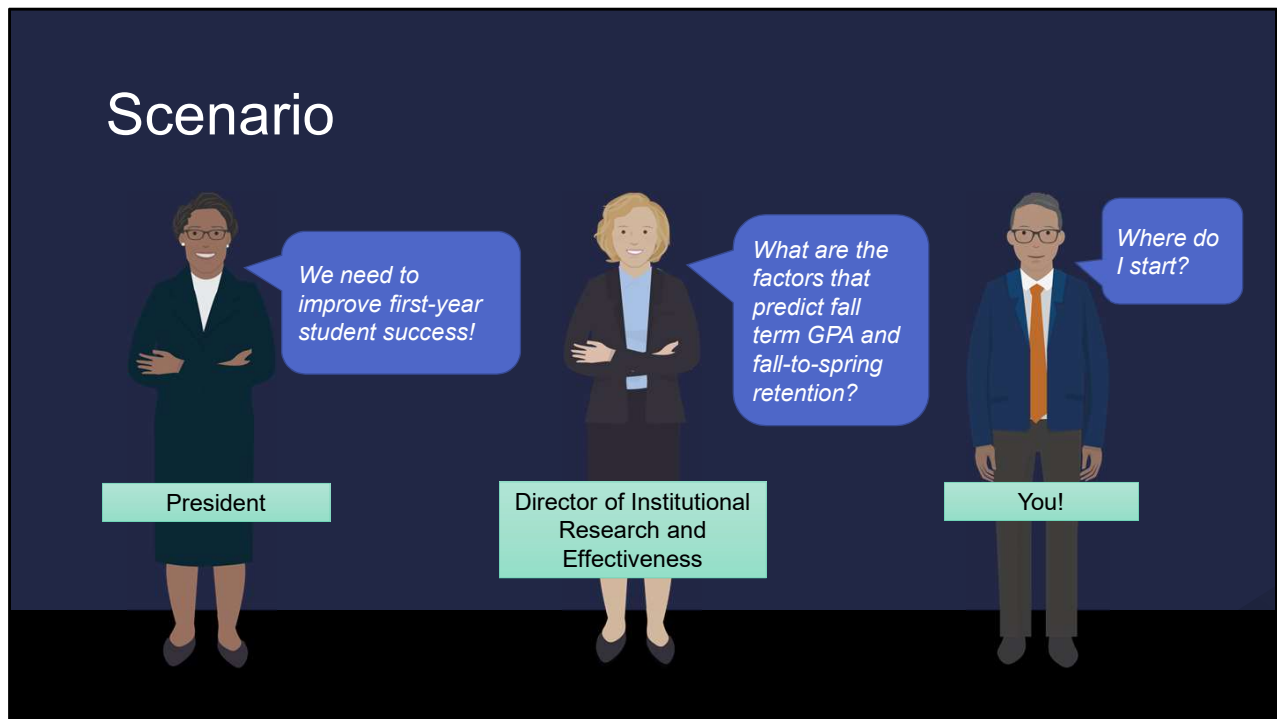
Webinar 1 – November 5, 2019

Webinar 2 – November 7, 2019



This is the second of a two-part webinar series. Tuesday's webinar looked at how to write a quality survey instrument. Today, we will discuss how to conduct a survey and tips for writing an effective report.

Scenario



On Tuesday, we described this scenario where your institution's president (or other senior leader) wants to be better understand an issue like how to improve first-year student success. They approach the Director of Institutional Research (or similar office) and they talk about the issue. In turn, the director assigns the project to you. You, being a novice survey researcher has to figure out how to conduct this project.

Sound familiar?

Understanding First-Year Student Success

We can't impact these

We might impact these?

Characteristics	Cognitive Skills	Academic Behaviors	Non-Cognitive Skills
<ul style="list-style-type: none">• Gender, race/ethnicity• Socio-economic status• First-gen status• Veteran status	<ul style="list-style-type: none">• SAT/ACT scores• HS GPA• Academic preparation	<ul style="list-style-type: none">• Class attendance• Sufficient study time• Time management	<ul style="list-style-type: none">• Social integration• Homesickness (distress)• Academic self-efficacy• Academic integration



Also on Tuesday, we discussed the factors that contribute to first-year student success which can be grouped into four categories:

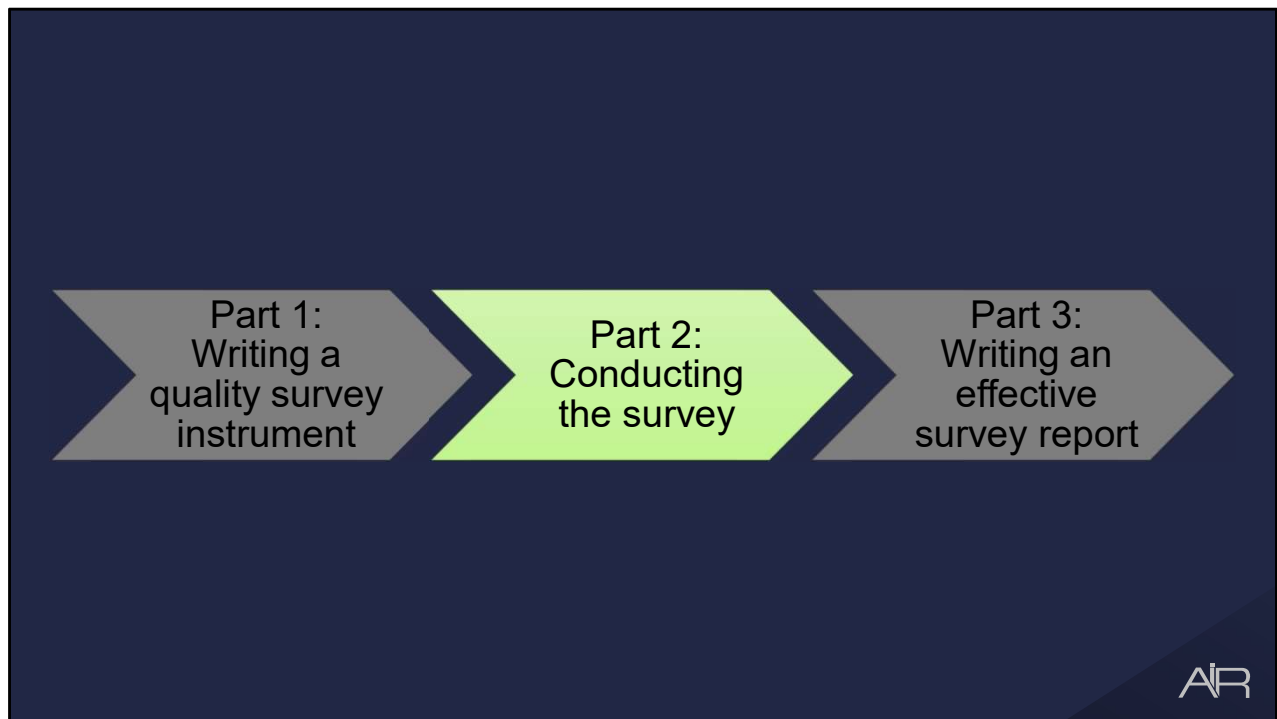
Characteristics of the student which include first-generation or military status

Their cognitive skills coming into college as measured by entrance test scores and high school GPA

The student's academic behaviors like whether they are attending class, how much time they devote to studying, and if they can manage their time.

And the last is the student's non-cognitive skills which include social and academic integration, homesickness, and self-efficacy.

While all four blocks contribute to a first-year student's academic success and their motivation to persist to the spring term, we focused on social integration to draft survey questions from.



Now that we are caught up from Tuesday's conversation, let's move forward to discussing how to best conduct a survey.



Survey response fatigue =
students stop responding to
surveys.

Disgruntled Units =
surveying at same time



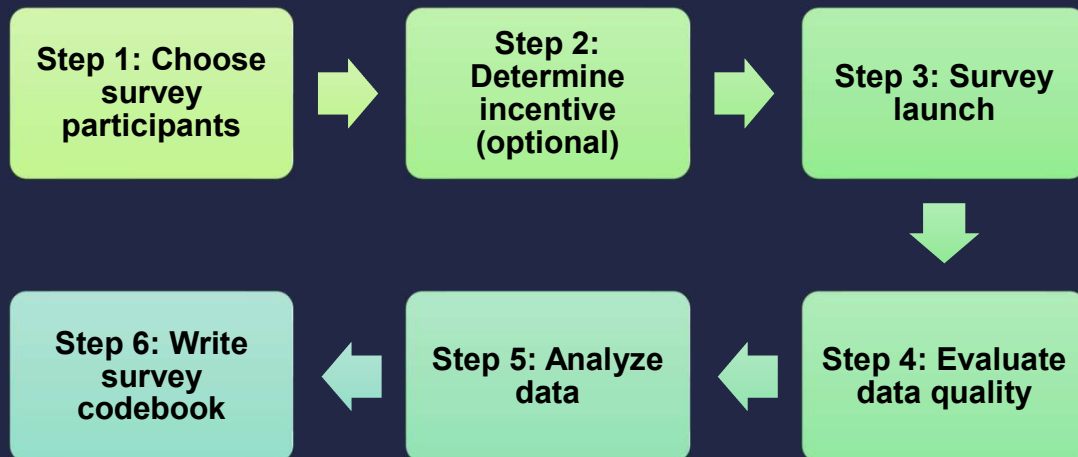
How many of you would just load up the list of your entire fall cohort and hit the “launch survey” button as quickly as it’s ready?

If you do that several times over the fall term, you’ll end up with a couple of things.

Survey response fatigue occurs when students become overwhelmed by the large number of requests for survey feedback and will stop taking all surveys. As a result, you’ll suffer with low response rates.

And, if you don’t coordinate your survey launch time with other units that survey like residence life, institutional effectiveness, and student activities, you’ll likely wind up surveying the same students at the same time which will hurt everyone’s response rates.

Step-by-Step Process



AR

Instead, let's consider this simple and easy-to-use process. First, we choose our survey participants, next we determine an incentive, then we determine our survey launch. After data are collected, we evaluate the quality of those data, and if those data are high quality, we proceed to analyze those data in preparation for reporting. Then, we update our survey codebook.

Let's discuss each step in depth.

Step 1: Choose Survey Participants

Population = group of subjects that are of interest to survey

Some institutions draw samples at the beginning of each term – A, B, C, etc.



Census Survey: Survey everyone in the population. Reserve for important surveys or if population is small

- Pro: No worry about sampling bias
- Con: Can exacerbate survey fatigue



Sample Survey: Survey a subset of population – called a “sample”

- Pro: Lessens survey fatigue
- Con: Careful when drawing a sample

AR

The first step in a successful data collection is to choose your survey participations. We have already identified the target population during the survey design phase.

When we survey everyone in our population, we call it a “census survey”. Census surveys should only be used if the population is small or if the survey is extremely important like a campus climate study. The upside of a census survey is that there is no issue with sampling bias but the downside is that it can contribute to survey fatigue.

A sample survey is when we only survey a segment of our population called a sample. Since we’re not surveying everyone all of the time, it helps to reduce survey fatigue but we need to be cautious about how we draw our sample.

I have spoken to some institutions who have a really nice practice in place. At the beginning of each term, the IR Office draws random samples of all their students and assigns them a sample number like A, B, or C. Then, when an institutional unit wants to conduct a survey, they are assigned a sample number and given those students’ contact information. That way, students aren’t over-surveyed.

Step 1: Choose Survey Participants (cont.)

Determine population



Create sampling frame



Select sample size



Use sampling technique

A				Determine Sample Size				D		E
1	Student ID	First Name	Last Name	Email	1	Stude				Random Number
2	12226390	Mary	Rouse	MaryRouse@eaststa	2	1226	Confidence Level:	<input checked="" type="radio"/> 95%	<input type="radio"/> 99%	0.995788911
3	12226391	Bill	Bernadel	BillBernadel@eastst	3	1222	Confidence Interval:	5		0.994811984
4	12226392	Tina	Antons	TinaAntons@eaststa	4	1242	Population:	1500		0.994380495
5	12226420	Edwin	Romious	EdwinRomious@east	5	1234				0.994206006
6	12226421	Stephanie	Gravitt	StephanieGravitt@e	6	1222	Calculate	Clear		0.994135914
7	12226422	Nichole	Palucki	NicholePalucki@east	7	1234	Sample size needed:	306		0.992526055
8	12226423	Dan	Jorgensen	DanJorgensen@east	8	1234				0.992294816
9	12226424	Lee	Falconer	LeeFalconer@eastst	9	1241				0.992062429
10	12226425	Marianne	Lin	MarianneLin@eastst	10	12227097	Kyle	Whisenand	KyleWhisenand@eaststate.edu	0.990821063
11	12226427	Chris	Zhang	ChrisZhang@eaststa	11	12350353	Sandra	Phillips	SandraPhillips@eaststate.edu	0.990536293

=RAND() then sort from highest to lowest value



It's pretty simple to draw a sample of students.

First, we determine our population. For our first-year student success survey, our population is all first-year students. We could have defined it our Fall Cohort but it's important to include part-time students.

Next, we create a "sampling frame" which is a list of names and email address of the population. That list needs to be in an Excel worksheet.

Next, we need to determine our sample size. Google the words "sample size calculator" and several free ones will show up. Choose one – it will look something like the one I have shown. Set the confidence level to 95%. The confidence level tells you how sure you can be the results you receive are real. Setting the confidence level at 95% says that you'll be 95% confident that the results are real. Setting it at 99% say's you'll be 99% confident. If you play with the calculator you'll see that the higher the confidence level, the more people you'll need to survey. Most social science researchers use a 95% confidence level.

Confidence interval is your margin of error. If you follow presidential polls you'll hear words like, "within a 3% margin of error". Most people set their confidence internal at 5%.

So, with these settings in there and assuming we have 1500 first-year students, I'll need to collect 306 completed responses. Assuming a 30% response rate, I'll need to survey 1,020 students.

Finally, I need to implement a sampling technique. The most common sampling techniques are the simple random sample, the stratified random sample, and the cluster sample. We'll use the simple random sample. Next to the email address, type in the formula "=RAND()" then copy that formula for every student. Copy and paste values those data to remove the formula then sort from highest to lowest. Select the top 1,020 students. Load these students into your online survey software.

Step 2: Determine Incentive (optional)



Works well!

- Token gift provided to all respondents
- Can't get for themselves (e.g., faculty parking permit)
- Extremely expensive (e.g., free housing contract)



Doesn't work well

- Items that only 1 student wins and that most students have (iPad, gaming system, laptops)

• Some are concerned that high-ticket incentives negatively influence participants.

• Some states have rules surrounding incentives!

AR

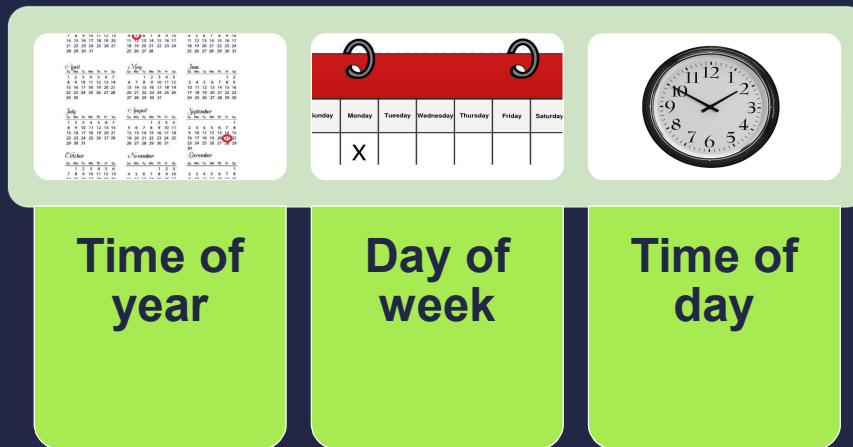
Step 2 in our survey process is to determine an incentive. In my role at the assessment company, we worked with over 1600 institutions every year and the question I got often was, “what’s the best incentive?”

In my research, I found that 3 things yielded the best response rates: the small token gift provided to all respondents like a free candy bar or a free coffee, something that can’t get for themselves like a faculty-parking-permit, or something extremely expensive like a free housing contract.

What didn’t work so well was the single mid-priced item like a laptop or an iPad that most people already have.

You do need to be aware that some researchers are concerned that high-ticket incentives can negatively influence participants meaning that students on the lower side of the financial scale may be more likely to participate thus biasing your data set. And, you need to be aware that some states like California have specific rules surrounding incentives – check first!

Step 3: Survey Launch



Coordinate your survey launch date with other institutional units that survey

Some institutions have "Assessment Day" when large-scale surveys are conducted

AIR

Step 3 is selecting the survey launch date.

Select the time of year that makes the most sense for the content. For our first-year student success survey, I want to understand that initial transition to college so I'm going to survey at the 3rd week of classes. By the 3rd week, students know whether they're going to be successful at school and whether they're fitting in. And, most already know if they're going to transfer out or not. Some things to consider:

- Avoid first week/mid-terms/last week of classes
- Avoid other surveys (e.g., NSSE)
- If longitudinal survey, use same time period

Next, which day of the week should you survey? This depends on your population but, in general:

- Monday/Friday: Work is gearing up or slowing down
- Saturday/Sunday: Students are probably relaxing/studying and not paying attention to email
- Tuesday - Thursday: A better time in my opinion

And, what time of the day should you survey? Consider launching in early afternoon when classes begins to taper off

Don't forget to coordinate your launch time with other institutional units who may also be surveying the same students.

To help mitigate survey fatigue, some institutions have adopted an "Assessment Day" where all large-scale surveys are conducted.

Step 3: Survey Launch (continued)

Contact	Description	Approximate Timing
Pre-notice*	Appeal for help, say when the invitation will arrive, describe the survey, and stress the importance of the response.	A few days before launch
Survey launch date	Survey is launched when the invitation email is sent with a link to the survey	Day 0
First reminder	Reminder email sent to non-respondents	Day 7
Second reminder*	Reminder email sent to non-respondents	Day 14
Last-chance reminder	Final reminder sent. Use different text in the subject line and body stating how important it is that they respond.	Day 19
Survey close date	Survey data collection is closed. Winners of incentive are notified. Respondents are thanked. Analyses begins.	Day 21

* Only use if survey is critical



Now, let's talk through the rest of the survey administration. If your survey is high profile, send out a pre-notice announcing that a survey is coming and requesting participation. If possible, have that pre-notice come from an influential person at your institution (e.g., the President, the Provost, the president of the Student Government Association)

A few days later, on the survey launch date that we identified in the earlier step, send the invitation email with a link to the survey.

Send up to two reminders (scheduled about a week apart) and a final "last-chance" reminder. The last-chance reminder should use a different subject line and body text and reaffirm how important this survey is.

Two to three weeks after survey launch date, the survey closes. Don't keep a survey open indefinitely with the hope that response rates will improve; you'll quickly discover that most responses come in within the first few days of a survey launch. After each reminder, you'll get a bump in responses but that effect quickly fades after the second or third reminder.

When your survey is high profile and response rates are lackluster, consider extending the survey close date a few days and send an extra survey reminder. While this tactic might work, use this sparingly since extending every survey might be irritating to your survey participants and they will soon disregard any future notifications.

Step 4: Evaluate Quality of Responses

Missing Data

Non-Response Bias

Validity

Reliability

AR

Now, let's assume that the survey has closed and we have downloaded the data. The next step in this phase is to evaluate whether those data are high quality or not. Let's explore missing data, non-response bias, validity, and reliability.

Missing Data

Random missing data

- No pattern in the missing data

Not random, but not important

- A pattern in missing data, but it doesn't affect important variables.

Not random and *is* important:

- A pattern of missing data that affects important variables.



During data collection, some respondents will skip questions that they don't want to, or won't, answer. This causes "missing data" in your response data set. A few missing data points isn't an issue, but when the amount of missing data is sizeable it can cause an issue with data quality. To identify an issue with missing data, first count the number of people who missed each survey question. Then, determine if there is a pattern to the missing data. There are three scenarios:

- Random missing data occurs when there is no pattern in the missing data across your variables. This is the most likely scenario and does not impact data quality.
- Not random, but not important missing data occurs when there is a pattern in the missing data, but it doesn't affect your most important variables. While not ideal, this should not negatively impact your study.
- Not random and *is* important missing data occurs when there is a pattern of data that affects your important variables. In this case, further exploration is necessary. For example, if you surveyed first-year students to determine the factors that affect their success and you found a lot of missing data connected to first-generation students, then the quality of your data (and the conclusions you could draw) would be suspect. This is the worst-case scenario. To fix this, first determine why those items were skipped and how to fix those items and second

resurvey that population.

Non-Response Bias

Extent to which respondents and non-respondents differ on an important metric.

Calculate the ratios of respondents/non-respondents and compare.

Less likely with high response rates.



If your data isn't missing a lot of data then you can move on to the next evaluation which is looking at non-response bias.

Non-response bias is the extent to which respondents and non-respondents differ on an important metric. For our first-year student success survey, some important characteristics might be first-generation student status, gender, race/ethnicity, and entrance test scores. If we compare our respondents and non-respondents (assuming we know the profile of our non-respondents), and the ratios are similar then we're good. But, if we have way too many white women with high test scores (which is group that over responds to surveys) then we'll need to go back and relaunch the survey to those that are under represented.

However, if response rates are high (60% or higher), it's unlikely that a non-response bias will affect your results.

Validity

Validity measures accuracy of instrument

Predictive validity: Survey data predicts a known future event

Discriminant (or divergent) validity: Survey data lacks a correlation between two variables that should not be correlated.



As we discussed in Tuesday's webinar, validity explains the accuracy of the results and we discussed face validity and content validity to determine if the survey items were clear and the survey measured the full experience.

Now, we can conduct validity tests on the data collected. Criterion-related validity tests are the most common to determine whether your survey produces results that it should (i.e., measures the relationship between the survey data and a known outcome). Let's discuss two types of validity:

Predictive validity refers to the degree to which your survey data predicts a future event that we know it should be able to predict because published research or other high-quality research conducted verifies that event. In our first-year student success survey, if we can show that students with good academic behaviors earn higher fall-term term GPA then we have shown predictive validity since published research has already shown this correlation.

On the other hand, discriminant (or divergent) validity refers to the lack of correlation between two variables that should not be correlated. For example, we know from student development literature that normal levels of homesickness do not correlate with student failure to persist. If your survey shows the same non-correlation, then you have shown discriminant validity.

Reliability

Reliability is a measure of consistency

Inter-rater reliability measures agreement between raters who are using the same instrument

Test-retest reliability measures consistency of data when survey is given at different times under the same conditions

Internal consistency measures results across common items within a factor. Cronbach's alpha is calculated.



As we discussed in Tuesday's webinar, reliability is a measure of consistency. Reliable survey instruments are robust; they can be trusted to provide quality data at different times and under altered conditions. The most common reliability tests are:

- Inter-rater reliability which measures the level of agreement between raters or judges who are using the same instrument
- Test-retest reliability measures the consistency of the data when the survey is given at different times under the same conditions (e.g., give the same survey to the same students at different times).
- Internal consistency measures results across common items within a factor (factors are also called constructs or scales). Questions comprising a factor should make logical sense to be included. In addition, those items would correlate with the other items if there were internal consistency. An inner-correlation called "Cronbach's alpha" is calculated.

Step 5: Analyze Data

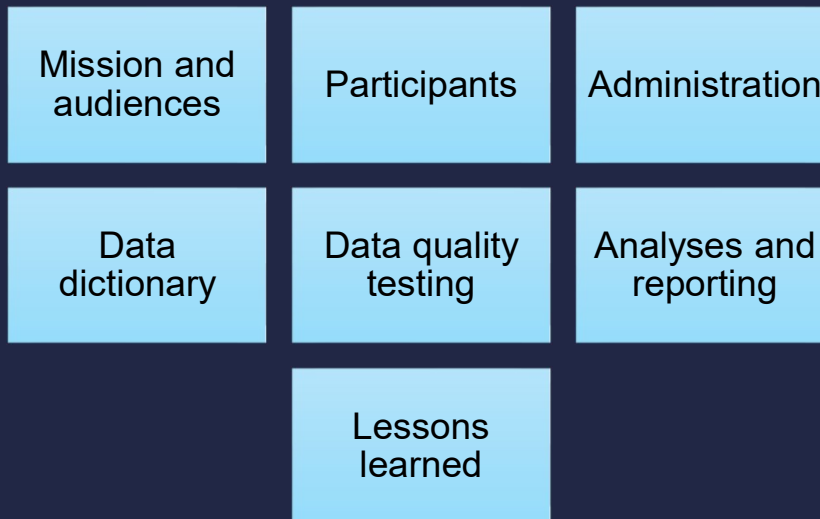
- Explore AIR Forum
- Explore AIR's online courses
- Explore institutional courses on descriptive statistics



If your data is shown to be high quality which means few randomly distributed missing data, no non-response bias, and high validity and reliability, then we can analyze those data. While I would love to delve into descriptive and predictive analytics and factor analyses, that would take way too much time.

If you need help in analytics, please check out the AIR website.

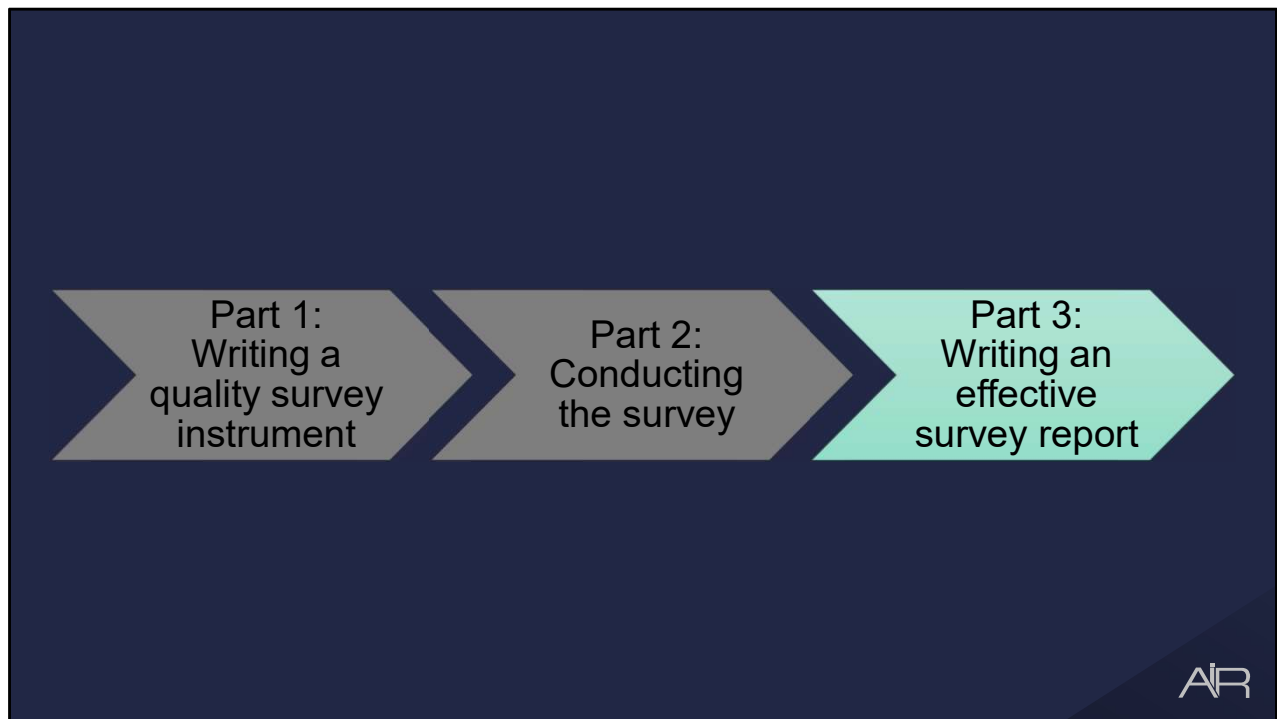
Step 6: Write Survey Codebook



AR

The last piece of this phase is documenting everything in your survey codebook. A survey codebook is your best friend when you go to conduct this survey or a similar survey in the future. Include the following:

- Mission and audiences: What is the goal of the survey? Research questions? Audiences?
- Participants: Target population? How were participants chosen? Response rate? Representative of population?
- Administration: How the survey was disseminated (e.g., online, paper)? When was launch/close dates? Include email invitation text, the number and dates of reminders.
- Data dictionary: Detailed descriptions of every survey variable (e.g., description, type), branching, reverse coding
- Data quality testing: Document reliability and validity tests conducted; issues like missing data and non-response bias
- Analyses and reporting: Document new variables created, how open-ended questions were themed, etc. Provide location of report
- Lessons learned: Document mishaps, lessons learned for the next administration, and ideas for changes



There have been volumes of books written on effective reporting but we're going to boil that down to nine tips for effective reporting!

Tip 1) Know your audience



What is your audience's experiences with information?



How much time will they spend reading the results?



The first thing to remember when writing your survey report is, who is reading this? What is their comfort level with information? Are they better with numbers and statistics or do they consume information better through narratives?

How much time can they devote to reading your report? Do they have 5 minutes? 10 minutes?



A report on survey data are not dry numbers and the obligatory graph; you're telling a story about something important about your students. In an residence hall student satisfaction survey, you're not quoting the percentage of students unhappy with their roommates but you're telling a story of how students who are uncomfortable in their living environment are less likely to perform well academically and may not retain to the residence hall or to the institution. Don't bury your message and rely on your audience to see it. Be overt.

Tip 3) Deliver your story quickly!

According to a recent Microsoft study, the average person now has the attention span of 8 seconds.



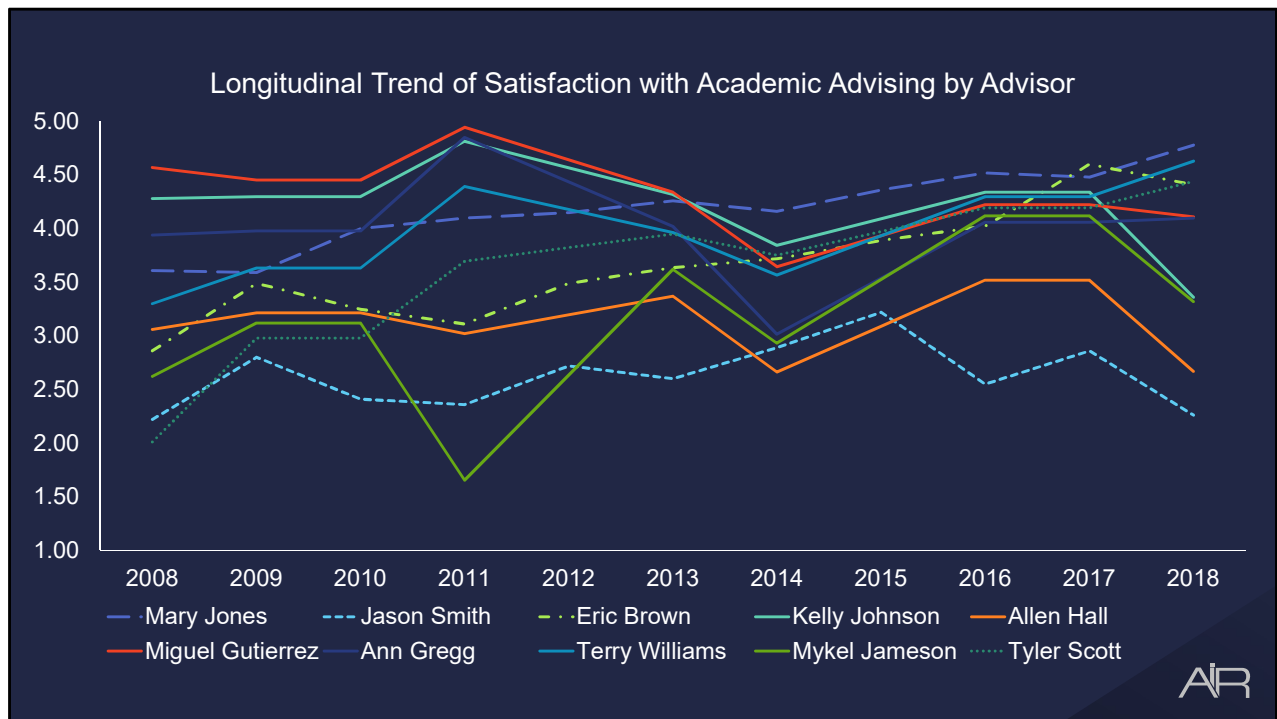
AR

Tip 4) Minimize the amount of data in a chart or table

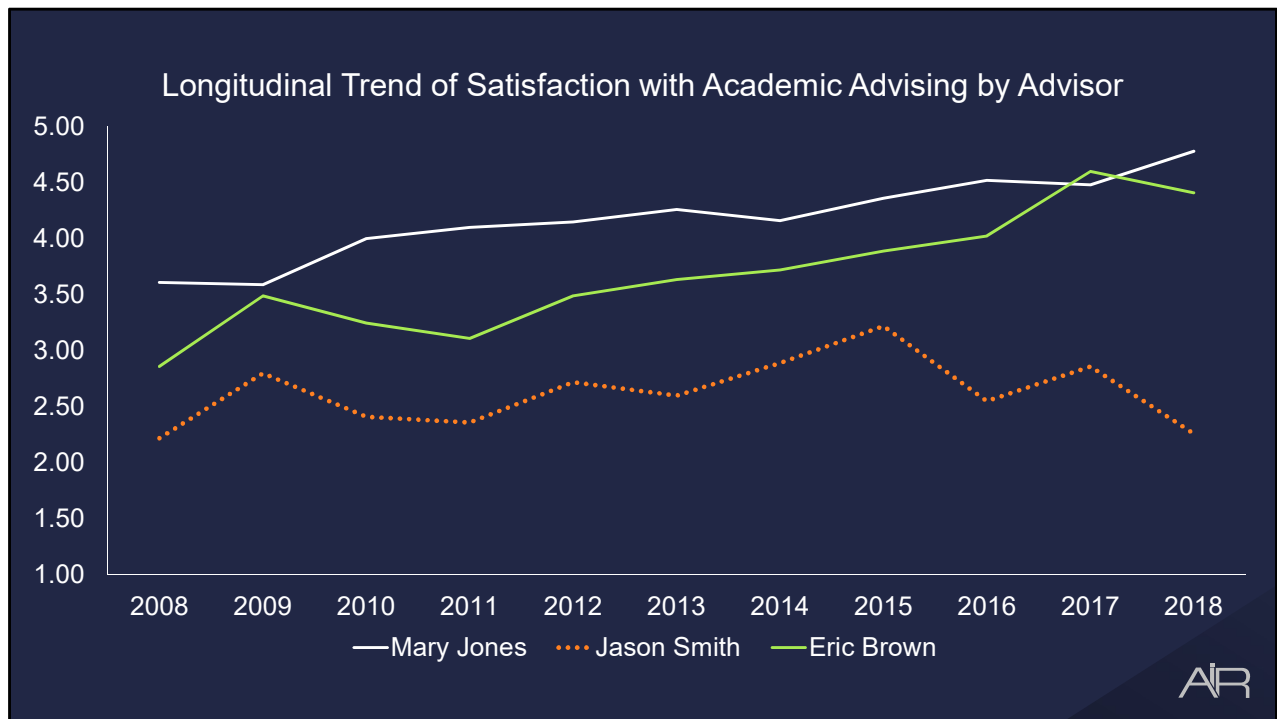


AR

Now that you have crafted your data story and can deliver that message concisely, it's time to think about tables and charts. One of the number one mistakes that I see a novice survey researcher do is see how much information they can cram into a graph for fear that they may accidentally leave something out. But, remember, in effective reporting, less is always more.



This is data from a fictitious institution's academic advising study that has been conducted for 10 years. Every academic advisor is listed. This is a convoluted mess of lines and no one will spend time trying to figure out your message.



But, we can pick three people who we want to focus our story on and now, the chart is readable. Don't fear not telling the entire story, we can put that data into an appendix.

Tip 5) Use color to enhance, not distract, from your story

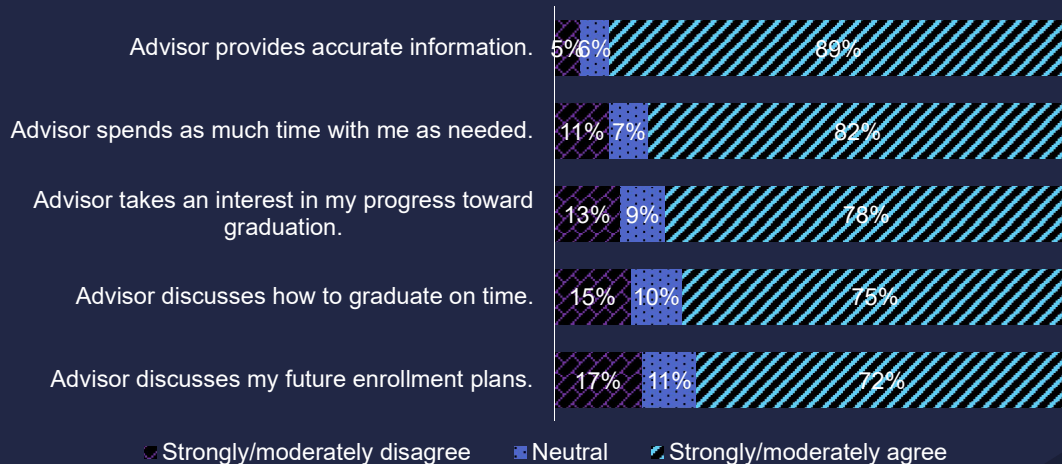


AR

The 5th thing to remember in effective reporting is to use color wisely. Too many weird colors will distract from your story, not enhance it.

Don't use distracting colors or patterns...

Evaluation of Academic Advisor



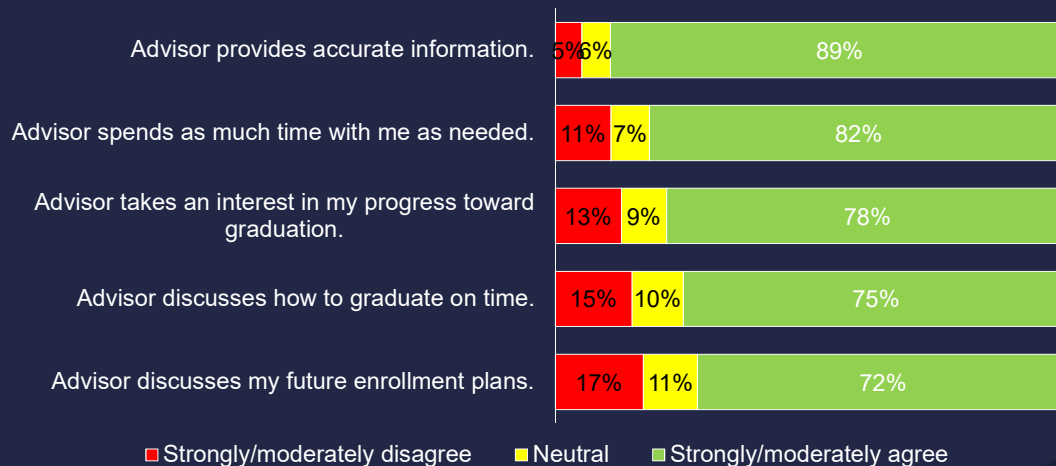
AR

Let's continue using our academic advising survey example. This chart is supposed to quickly convey the message that most students agreed that their advisor provides accurate information but that far fewer said their advisor discusses their future enrollment plans.

The owner of the company I worked for wanted us to use purple, blue, orange and all kinds of weird patterns in our graphs. Remember the 8 second rule - if your reader spends more than 8 seconds trying to understand your color coding or trying to read information contained in a harsh pattern, then I might lose their attention.

... use “stoplight” colors when appropriate

Evaluation of Academic Advisor



AR

I'm a fan of the “stoplight” color scheme when it's appropriate (red signals dissatisfaction/disagreement, yellow signals neutral ratings, and green signals satisfaction/agreement).

In this chart, we have color coded the three response categories in red, yellow and green. The beauty of the stoplight color scheme is that you don't have to explain it; everyone intuitively sees green and thinks “positive”. Now, my user doesn't have to spend their 8 seconds reading the legend.

Tip 6) Simplify complex information



The next thing to remember when writing your report is to consider simplifying complex information to help convey the message.

Numbers can be intimidating to some...

Evaluation of Advisor by New Student Type	Transfer-In Students	Native Students
Advisor provides accurate information.	4.60	4.33
Advisor spends as much time with me as needed.	4.54	4.09
Advisor takes an interest in my progress toward graduation.	4.45	3.97
Advisor discusses how to graduate on time.	4.28	3.83
Advisor discusses my future enrollment plans.	4.25	3.72



Continuing with our academic advising survey, here we have a data table that shows the average response from students cut by the type of new student responding – a new transfer-in student or a new native student.

Numbers can be intimidating to some audiences and it may take them a while to understand your message. Is a 3.72 on a 5 point scale good? What does that mean regarding their satisfaction?

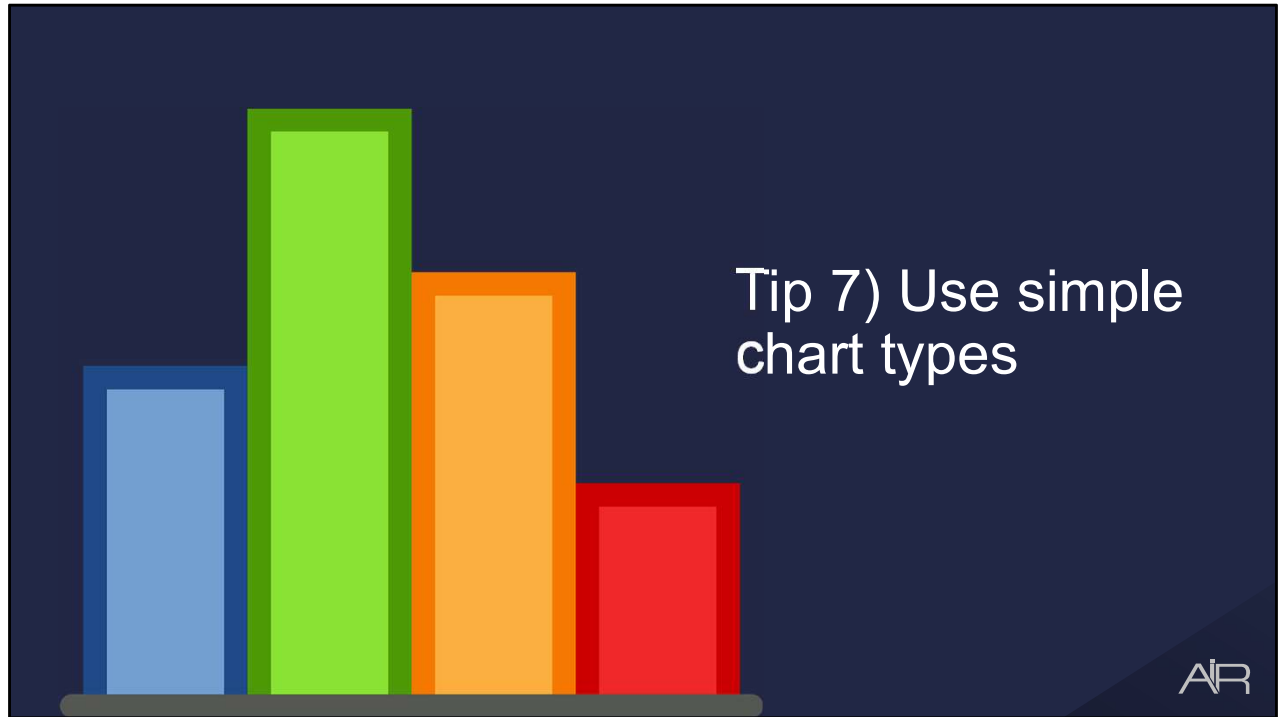
... so, consider using directional symbols

Evaluation of Advisor by New Student Type	Transfer-In Students	Native Students
Advisor provides accurate information.	↑	↔
Advisor spends as much time with me as needed.	↑	↔
Advisor takes an interest in my progress toward graduation.	↔	↓
Advisor discusses how to graduate on time.	↔	↓
Advisor discusses my future enrollment plans.	↔	↓
↑: Mean of 4.50 or higher; ↔: Mean between 4.00 to 4.49; ↓: Mean less than 4.00		

AR

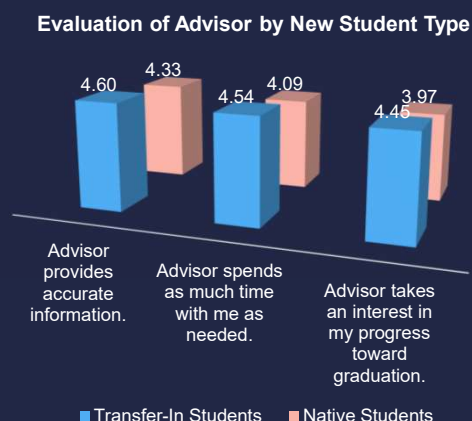
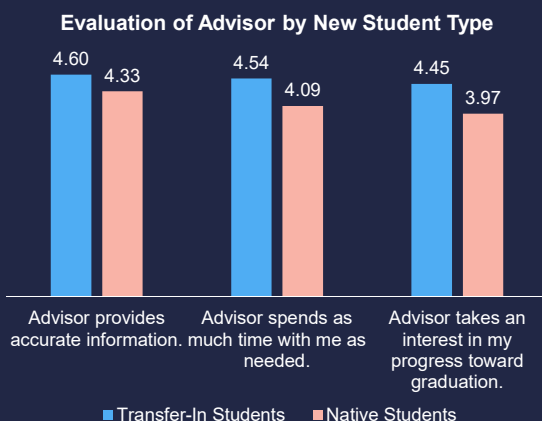
If your audience is not comfortable reading data, consider using a directional symbol instead. Here, we took those data and replaced the mean values with arrows. In addition, we used the “stop-light” color scheme to further help our reader identify higher means, moderate means, and lower means.

Now, we’re telling our audience that means higher than a 4.50 is very good, means between 4.00 and 4.49 are ok, and means less than 4.00 need attention.



The 7th thing to remember in writing your report is to use simple chart types.

Don't use 3-D charts



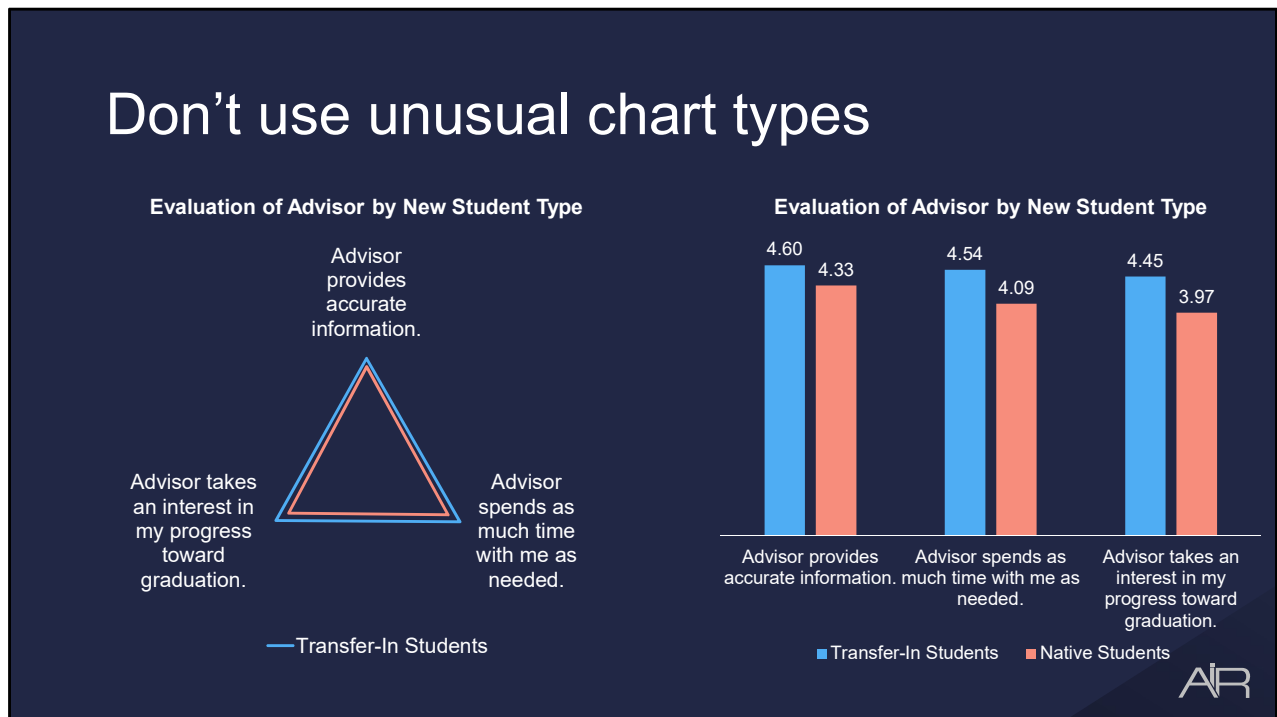
AR

First, don't use 3-D charts. Here we have a two-dimensional bar chart showing the mean of questions evaluating the academic advisor by the type of new student.

The right-side chart is the exact same data but now placed in a 3-D bar chart. While the chart may be more visually appealing, the 3-D enhancement distorts the magnitude of the differences across categories, making smaller differences look larger and minimizing smaller differences.

In this case, the orange bars associated with native students appear taller than the blue bars for the transfer-in students even though the means for the transfer-in students are higher than the native students. This distortion can cause significant confusion for your reader. So, please don't use 3-D charts unless you're confident your reader can interpret the findings correctly.

Don't use unusual chart types



And, don't use unusual chart types. Reporting software like Excel and Tableau have a lot of crazy chart types to offer you but that doesn't mean you need to use them.

Let's plot our academic advising data using a radar or spider chart. If you study this plot long enough, you'll understand that the blue line is always outside the orange line and, thus, the mean of transfer-in students is always higher than native students. But, how long will it take your reader, who is unfamiliar with radar charts, to figure this out?

The better option is a simple bar chart. This immediately relays the information that transfer-in students are more satisfied than native students. So, while it's not sexy, when in doubt, stick with basic chart types like bar, line, or pie.

8) Put data in meaningful order



As we said earlier, you have 8 seconds to get your point across to your reader before they give up, so you have to make sure that your story is easily consumed. One way to do that, is to order your information by the story you're trying to tell.

Sorting data by question number does not help tell data story...

Question Description	N	Mean	Std Dev
Q1. Advisor knowledgeable about: Course requirements for general education/core curriculum	465	4.41	0.90
Q2. Advisor knowledgeable about: Degree requirements	466	4.13	1.21
Q3. Academic advising enhanced ability to: Identify majors that align with your professional goals	470	4.23	1.13
Q4. Academic advising enhanced ability to: Select courses for an on-time graduation	455	3.89	1.34
Q5. Academic advising enhanced ability to: Obtain financial aid if needed	461	3.98	1.26
Q6. Academic advising enhanced ability to: Locate help to overcome academic difficulties	470	4.36	0.97
Q7. Academic advising experience was an accepting environment.	465	4.40	0.93
Q8. Academic advising was a positive academic experience	437	3.80	1.31
Q9. I would recommend this advising experience to a close friend	455	4.00	1.22

AR

Using our academic advising survey as an example, we want the reader to understand in which area academic advisors excel in and which area they need improvement. How can we order the data to convey that message loud and clear?

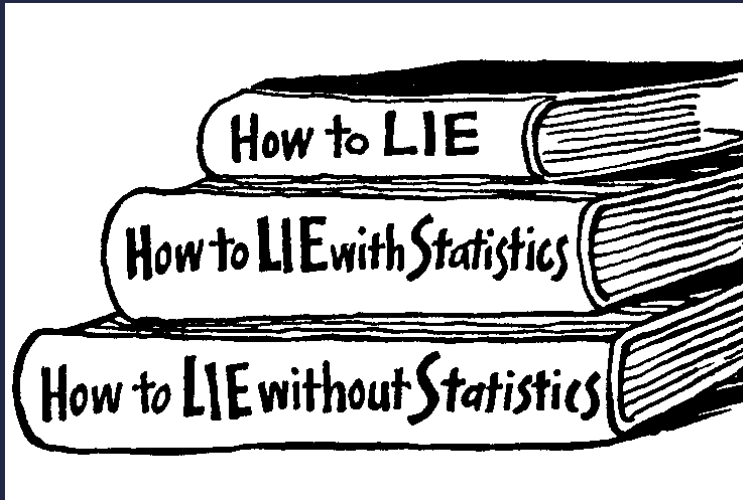
In this table, data are sorted by the survey's question number which is a mistake I see often. Can you quickly identify which item has the highest and lowest mean in a few seconds? If not, you just lost your reader.

... but ordering by mean does!

Question Description	N	Mean	Std Dev
Q1. Advisor knowledgeable about: Course requirements for general education/core curriculum	465	4.41	0.90
Q7. Academic advising experience was an accepting environment.	465	4.40	0.93
Q6. Academic advising enhanced ability to: Locate help to overcome academic difficulties	470	4.36	0.97
Q3. Academic advising enhanced ability to: Identify majors that align with your professional goals	470	4.23	1.13
Q2. Advisor knowledgeable about: Degree requirements	466	4.13	1.21
Q9. I would recommend this advising experience to a close friend	455	4.00	1.22
Q5. Academic advising enhanced ability to: Obtain financial aid if needed	461	3.98	1.26
Q4. Academic advising enhanced ability to: Select courses for an on-time graduation	455	3.89	1.34
Q8. Academic advising was a positive academic experience	437	3.80	1.31

AR

Now look at that same table but the data has been sorted from highest to lowest mean. Now your reader can look at the first and last question and know exactly what were the highest and lowest performing areas. In addition, I added a green and red color to indicate high and low mean questions.

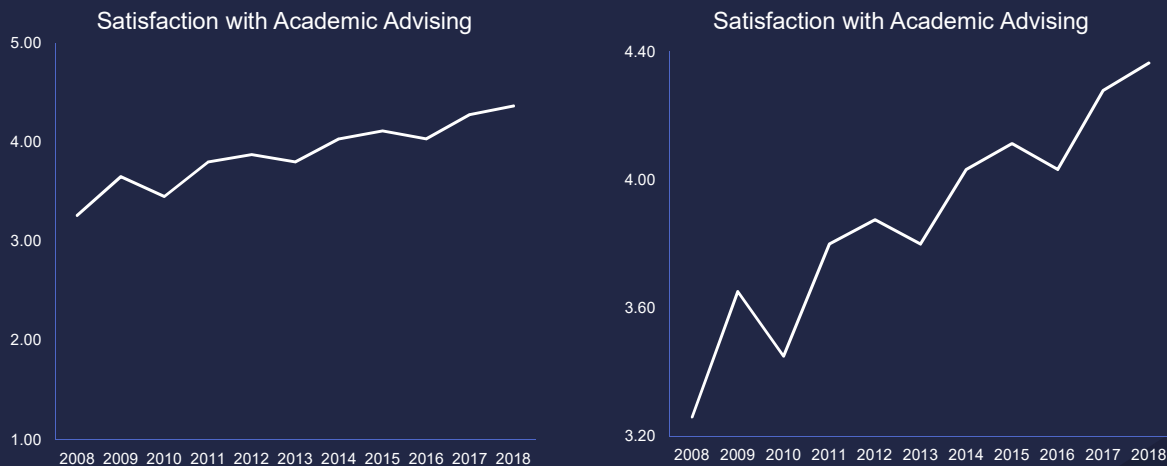


9) Don't bias
your data story

AR

The last thing to think about while writing your report is to not intentionally, or unintentionally, bias your data story. Mark Twain voiced a frustration with folks like us when he said, “there’s lies, damned lies, and statistics.” We deserve that criticism when we try and manipulate charts and tables to tell a story that isn’t right.

“Truncating the Scale”



This chart is an example of a trend line showing satisfaction with academic advising with a steady improvement in scores.

But, this second chart appears to have a much steeper and more impressive trend line. Would you believe this is the same data?

The left-side chart has the y-axis scale set from 1.0 to 5.0 which is the range of the Likert scale while the chart on the right has a truncated scale from 3.2 to 4.4. Truncating the scale effectively zooms into the trend line. This process is useful when there's a trend that is important but is masked if the scale is too large.

Truncating the scale can mislead the reader if he/she isn't skilled enough to notice the y-axis scale change or understand how small differences can appear large. We have biased our reader into thinking that our academic advising survey is showing huge gains

Executive Summary

Academic Papers...

- » Thoroughly explore a topic
- » Are long and methodical
- » Findings are buried in the paper

Executive Summary reports...

- » Quickly convey findings
- » Are short and concise (2 pages)
- » Findings are front and center



Now, pulling all of that together, let's end the webinar by talking about the executive summary. Most stakeholders (like presidents, deans, faculty, students) don't have a lot of spare time to study reams of analyses so a well-written Executive Summary may be your only opportunity to communicate the results of your work.

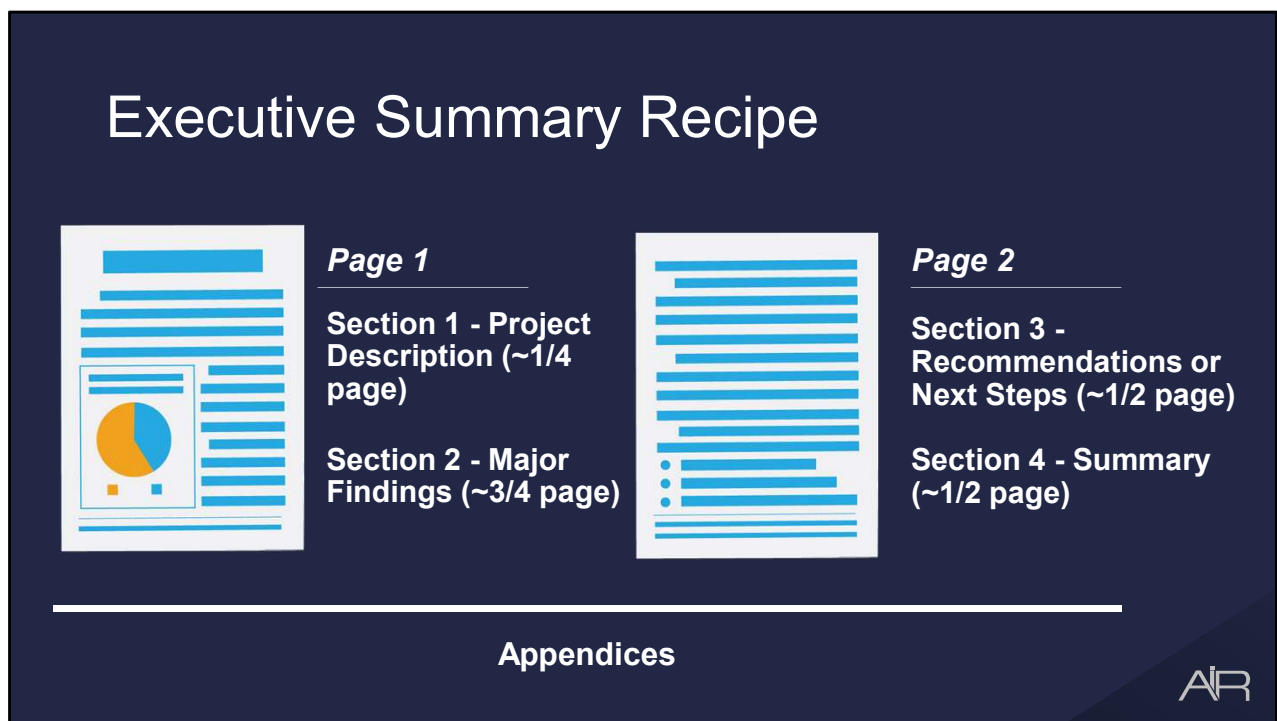
An Executive Summary is NOT an academic paper or thesis.

An academic paper's purpose is to thoroughly explore a topic while an Executive Summary's purpose is to convey findings quickly.

Academic papers are typically long and methodical but an Executive Summary is short and concise. Typically no more than two pages, easy to read without a lot of statistical jargon, and includes visual charts and tables to highlight key findings.

Academic papers typically begin with an abstract followed by a lengthy literature review and a discussion of research methodologies. The important findings are found buried deep in the paper. An Executive Summary is the exact opposite. You won't include a literature review or research methodologies in the summary but you should include those in an appendix. The reader assumes you are familiar with the literature and appropriate methodologies and have used that information to inform the study and report. You'll discuss your findings almost immediately in an Executive Summary.

Executive Summary Recipe



This is a recipe for an Executive Summary that I've used for years and has been well vetted. Section 1 is the Project Description - it should be no more than a quarter of a page. Consider including the following:

- The mission of the survey, the person or unit who requested the project be conducted, and any other institutional units that were involved
- The survey launch and close date and how the data was collected (was it an online survey, paper survey, focus group)
- A description of the target population, number of participants, number of responses, and the response rate
- A statement confirming the quality/representativeness of the collected data to the target population

The second section is "Major Findings" and should be around $\frac{3}{4}$ of a page. How do you decide what to include? Go back and remind yourself of the mission of this survey. Review the research questions and any notes you made about what you hoped to learn from the study. Also, work with the original requester of this work to get their input.

Section 3 is "Recommendations or Next Steps" and should be no more than a half-page. Here, we link theory to practice and provide some practical recommendations for improvement or next steps. If you're comfortable with the subject matter then draft your recommendations. If the survey explores content outside your expertise and you don't feel comfortable drafting recommendations, then work with your project requester and/or another subject matter expert and have them frame recommendations and next steps.

The fourth section is "Summary". These are the three to five most important "takeaways" for this project. If a stakeholder can only spend a couple of minutes reading your report, make sure that the Summary hits the most important issues.

The last section, Appendices, is as long as you need it to be.

Questions & Discussion



Let's pause to answer some questions.

Thank You

You should receive an email containing a link to evaluate this webinar shortly. Please share your feedback!

Visit www.airweb.org/education to find more AIR educational opportunities.

Darlana Jones, AIR



Thank you for your participation in this webinar series! If you would like to check out other educational opportunities on survey research, assessment, and statistics, please visit the AIR website.

Also, don't forget that you'll be receiving an email with a link to a survey to give us feedback.

Thank you for attending and have a great rest of your day and week!