Making Reliable
Data-Based Decisions



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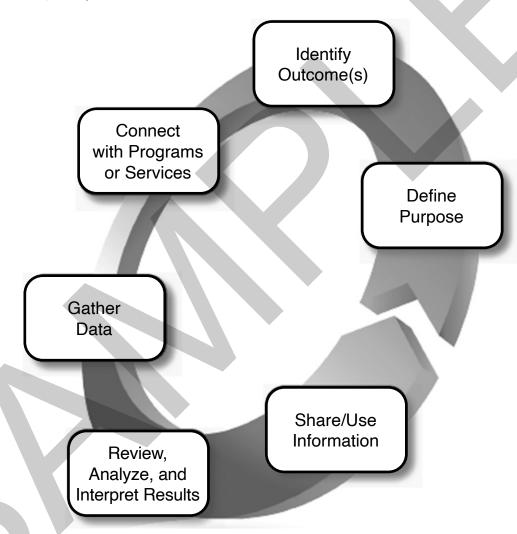
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Choosing the Right Data Collection Tool

It's important to begin our conversation in the context of the entire assessment cycle (Yousey-Elsener, 2013):



Choosing which data collection tool to use comes in the middle of the process. Before jumping in to collect data, remember to define purpose, identify outcomes and connect them with programs, services, courses, etc. Only then will the decision about how to gather information be most effective. In other words, as Gary Thomas (2013) states, "You shouldn't...come up with a tool first and then try and find a way of using it" (p. 192).

Choosing the Right Data Collection Tool (continued)

Think of selecting a data collection tool much like a carpenter might build a house. This initial step is not just grabbing a hammer and nails, it begins by creating a design for the house, laying out a plan on blueprints, and then selecting the right tools and equipment to build the finished product.

Someone constructing an assessment project finds more success when the time is taken to define the goals/purpose, have a measurable outcome(s) and ensure that these outcomes are connected with programs/services/courses/etc. before selecting a data collection tool. With that in mind, one of the first questions often is *Why can't I just keep doing the survey I always do?*

"Assessment works best when the program(s) it seeks to improve have clear, explicitly stated purposes."

Banta, Lund, Black,Oblander, 1996, p. 2

Having the gift of knowing more tools than the survey (the assessment version of a hammer) allows for many opportunities, including:

- Doing fewer surveys! Which helps to avoid survey fatigue and boost response rates when a survey is indeed the best tool to use.
- Putting to better use the large amount of data already available on a campus.
- ▶ Being able to tell deeper, richer stories because of gathering a variety of data.

Going back to our house analogy, you can construct the same box house every year by using the same old tools or you can create more interesting homes by expanding your toolbox and learning new techniques.

"I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail."

- Maslow, 1966, p. 15

Anyone who watches a lot of home improvement TV knows that learning how to use hand tools begins with knowing what tools are out there, having someone who has some knowledge about the tool explain the safe way to use it and then trying it out. It then takes practice in order to build confidence and use it well.

This binder is meant to do just that with assessment tools, by introducing some that you may or may not have heard of before, explaining what each tool is and how it can be used safely (e.g., ethically and trustworthy) in assessment and providing some resources so that practice can begin and confidence can be built.

Choosing the Right Data Collection Tool (continued)

"If you want to understand generalities, surveys are your tools. But if you really want to learn why and how something is happening, you have to use other tools."

Gavin Henning, Associate
 Professor of Higher Education
 and Director, Master's of Higher
 Education Administration and
 Doctorate of Education Programs,
 New England College

Keep in mind that one of the best things about assessment is that it doesn't have to be perfect the first time around. By trying new tools you will learn more about what works for you, in your specific context/culture, with your audience and with the people you need to gather data from.

Defining Data Collection Methods

Before we begin exploring some of those tools, let's be clear about some definitions. First, the words "data collection method" have been intentionally left out of this binder. Strictly speaking, a method in research is "a systematic procedure, technique, or mode of inquiry employed by or proper to a particular discipline or art" (Webster's Dictionary, 2014). When in the context of collecting data, a method is a larger concept used by researchers to help define their framework for conducting

their research. This is different than the actual tool they use to collect the data (e.g., interviews, surveys, rubrics, etc.). While many professionals use the term "method" to describe how they gather their data, the distinction is important to make as a frame of reference for the work we do in assessment. Therefore we are talking about tools instead of methods throughout this resource.

How to Choose Your Tool Intentionally

Beyond just learning the tools and trying them out, it is also important to be systematic about the decisions regarding the tools being used. "Systematic" is often brought up in the assessment world. Similar to words like "transparent" and "closing the loop," it has often lost its meaning. In this case, systematic means choosing a method in a thoughtful, planned out and intentional way. To begin that process, there are a few things to consider when choosing a data collection tool, so complete the worksheet on the following page prior to continuing on in this binder. It assists with making some larger decisions prior to looking at a tool in order to help narrow down the choices. When exploring the tools in the remainder of the binder, a legend is included at the beginning of each description that lists the same elements in order to easily match your data collection needs with various tools.

Existing Data

Things to Consider

- Shorter timeline (if access to the data is readily available)
- Breadth of information (most often)
- Anonymous or confidential, most often confidential
- Indirect assessment
- Low resources (most often)
- Non-responsive in nature

Define and Describe

Also called secondary data analysis, existing data comes in many different formats. Think of it as information that has already been gathered for another purpose but with a little data analysis and organization can serve a different purpose for assessment. Traditionally, existing data was thought of as survey data or student information contained in larger databases, but that definition has been expanded to include any information available. Existing data can take the form of:

- National databases (e.g., IPEDS consult the Institutional Research office for other possibilities and how to get access to data, it is often limited to specific individuals on campus that can pull data for others)
- ▶ Larger-scale surveys already collected on campus (e.g., NSSE, CIRP, First-Year Surveys, Alcohol Edu, etc.) consult the Institutional Research office to see what might be available

"At the outset of a new assessment project, a good place to start is to consider what information is already available that fits the purpose of the project."

Schuh and Associates, 2009, p. 23

- **▶** Sign-in sheets or card reader information
- **▶** Applications for scholarships or programs
- → Duty logs
- >> Judicial records
- ➤ Any form someone fills out
- **▶** Surveys collected by someone else
- >> Student information databases
- ▶ Blogs/journals

Existing Data (continued)

- **▶** Resumes and cover letters
- **→** Calendars
- Almost any form of technology stores data: Involvement platforms, Career search platforms, Judicial case platforms, Course management tools, Apps, etc.

There are probably even more existing data sources available in your specific context or area and hopefully this list can get you started on brainstorming some other ideas. When people are asked to take their specific assessment project topic and think about data sources, most often they can think of at least one or two that may give them some useful information. Sometimes that information needs to be supplemented with newly collected data, but it provides a place to start.

Strengths	Challenges
No time needed to collect data	Reliant on the reliability/validity or trustworthiness of the source – the information used is only as good as the process/person who collected it
No risk of survey fatigue, response rate issues	Non-responsive in nature (aka no follow-up option)
Utilize processes/systems already in place	If using survey data collected for another purpose, response rates are pre-determined by the data that exists
Capitalizes on previous assessment efforts	Gaining access to data that may be housed elsewhere or have restrictions
Unobtrusive in nature – meaning the source of information does not need to be asked for the same information again	You may need to create a system or adjust current systems in order to better capture data
Can save personnel, money and time	Data may not be sufficient, may require follow- up
	Ensuring that the existing data source fits the purpose or outcome of the assessment project
	If using already collected survey data – availability of someone with data analysis expertise to drill down to the data needed

Existing Data (continued)

Example

Contributed by Kim Yousey-Elsener, University at Buffalo.

In the Fall of 2013, the University at Buffalo (UB) saw an increase in negative publicity related to student alcohol use. Students at UB typically chose to hold parties off-campus at houses located in the surrounding neighborhood around the South Campus. That fall, the community members in that neighborhood made a concerted effort to create a negative buzz through the local media about student alcohol use and partying on the weekends. This publicity included video footage of drunk students, among other negative stories featured in the local news, in the first month of the academic year.

Prior to the winter retreat, the Vice President of Student Affairs gathered the directors in the Division and posed the question: Is alcohol a growing problem on this campus or did the actions of the community just lead to greater attention? The answer was meant to help determine where to add or shift resources in order to address the problem. The Vice President then asked any director who had *already collected data* that might answer that question to send information to the division's Assessment Coordinator in time for the January retreat.

At the retreat, the leadership team examined data from the following existing data sources:

- ➤ Alcohol Edu first year survey on alcohol use and behaviors, last 5 years
- ▶ National College Health Assessment (NCHA) National benchmarking survey that asks students questions about alcohol use and associated behaviors, 2010 and 2013 comparisons
- ▶ Judicial Records Number of judicial cases, types of cases, cases by key demographics, breakdown of sanctions applied, etc., last 5 years
- ▶ University Police Records Number of arrests, last 5 years
- ➤ Counseling Services Alcohol transports, last 5 years
- ▶ University Transportation Services Number of students being transported between North and South Campus on weekends, last 5 years
- ▶ Late Night UB Number of participants, demographics of who attends, participation trends by week of the semester, past 2 years

The data from each of these sources was presented in a summarized fashion and discussed by the group. In each case the team examined the limitations of the data, any interpretations,

Existing Data (continued)

remaining questions, etc. No single data-set was complete but when grouped together it pointed towards several trends:

- → Alcohol use and negative behaviors peaked around 2011 at UB and have been steadily decreasing since that time with the lowest point in Fall 2013
- Transportation usage and judicial cases point towards issues on Friday and Saturday nights and especially during the first 6-7 weeks of the semester (depending on when the weather starts to get cold)
- ▶ Demographics of students involved in judicial cases were surprising most students had strong GPAs, juniors/senior were overwhelmingly male and on-campus was split male/ female
- ▶ Demographics of those attending Late Night UB were surprising evenly split between residents and commuters, shifting demographics depending on what was being offered that week

Based on the data, the leadership team left the retreat with the following conclusions/action steps:

- The alcohol issues are not getting worse, however there is always room for more efforts around harm reduction
- More resources are needed to build up late night programming and other alternatives during the first 6-8 week of the semester on Friday AND Saturday nights
- ➤ Enforcement and other efforts more visually noticeable by the community need to happen in the early Fall
- More communication and outreach needs to happen with community members so that the negative publicity does not continue (a strategic task force was later charged with looking at what actions to take specifically in and around that neighborhood)

Tracking Student Data Using ID Card Swiping

One unique form of existing data that has taken on a new life in recent years is tracking student participation, particularly using ID card swiping technology. When *Assessment in Student Affairs:* A Guide for Practitioners by Upcraft and Schuh was published in 1996 they described "the first component of a comprehensive student affairs assessment program is keeping track of who use student services, programs and facilities" (p. 113).

As assessment practice and culture grew, simply tracking numbers of attendees was often looked upon as not "good enough" assessment as it lacked detail about program and service

Existing Data (continued)

effectiveness and student learning. The proverbial pendulum swung away from using such data as a regular assessment practice.

Currently that pendulum is swinging back to see tracking student usage data as an essential piece of the assessment puzzle once again. Why? Tracking student data and presenting it well assists with:

- Demonstrating who is using programs and services (if student demographic data is included and not just numbers)
- **▶** Showing gaps in services
- **▶** Garnering more resources to support underfunded programs
- As student populations get more diverse, an increased ability to see who is attending/being served and, more importantly, who is not attending/being served in order to expand program reach
- Attaching student participation with specific learning outcomes to co-curricular transcripts or identifying out-of-classroom learning

One key element that makes student tracking data informative and robust is ensuring that the data is not just presented as a blanket number (e.g., 450 attended Late Night programming on Friday), but instead is connected with additional information that speaks to your audience or assessment purpose.

Always connect student participation data with additional information that provides context and deeper information. This can include:

- Student demographic profiles
- Associated learning assessed with participation
- · Detailed information about programs/services used
- Attaching numbers with staffing patterns or student:staff ratios
- Tracking what specific activities students are using in order to eliminate unnecessary or underutilized aspects of a program

Existing Data (continued)

For example, ID card swiping used at Late Night programming has helped the University at Buffalo (UB) to determine who exactly is coming to Late Night (And guess what? The actual data did not line up with the assumptions being made about who was attending!) and how the demographics shift depending on what programming was being offered. This allowed the program to adjust their offerings to attract a more diverse group of attendees and receive more funding to adjust the current programming schedule. When added to focus group and survey data, the tracking data helped tell a more complete story of what was currently happening at Late Night UB and what direction it needed to move in the future.

Tracking student participation is becoming easier with the development of new technology. Many systems exist to track data using ID card swiping or bar code scanning. One question to ask when researching technology is how the data is retrieved on the "backend" after the ID card is swiped. Many systems dump into a text file or Excel spreadsheet, which takes some data manipulation in order to get it into a format that can be matched with demographic files and other formats. Also, if the data is being stored by a third party vendor off-campus, examine their data security and data sharing policies very carefully. It is helpful to look at these systems as a team with someone from the ID card office, IT staff and student information system staff, to ensure the system serves your purpose while ensuring that campus security and privacy policies are being followed.

If technology is not in your budget, there are other ways to track student information. The author has personally had great success with signing students in with some basic information and then tallying that information to make a larger case. For example, at NYU when she led the College Learning Center, they simply recorded everyone they served by class year, subject needed (for tutoring) and college/unit. A simple morning activity was counting the number of students who attended the previous day from the sign in sheets broken down by class year, subject and college/unit. This data, while simple, was very effective in showing need in particular subjects, tutor:student ratios and other areas or gaps in what support students needed, which led to more funding and a larger space.

Existing Data (continued)

Ethical Considerations

Because existing data has already been collected, many of the ethical considerations taken to collect data do not apply. The most important thing to remember is *aggregating data into summary form is always the most ethical option for existing data*. But there are still a few additional things to consider:

- If the data was previously collected with a project that received IRB approval, is additional approval needed in order to re-purpose the data?
- How can data be used without violating confidentiality? (The calendars used in the example above are a good illustration of this. Outlook calendars were public at RIT so the team could have just gone in and used them, however it was important for the team to discuss with professional staff how they were using calendar information, when, and to ensure that individual information would not be revealed in order to build trust in the process and show their ethical decisions.)
- Are we using data in a way that maintains its integrity and the integrity of the data source? For example, if students were told that their applications were confidential, then quotes from the application cannot be used in marketing materials or for a public presentation without asking their permission.
- Am I confident that the data was originally collected in a reliable way? If not, is there someone I can ask for more details about how the data was collected?

Analyzing Data

Analyzing existing data can take on many different shapes and forms, depending on the source. Some ideas may include:

- Tallying or counting things to get total numbers (e.g., number of judicial cases, number of students seen by an office, etc.)
- >> Connecting data via student ID number with demographic and other information
- Re-analyzing statistical data provided by larger surveys (caution: be sure the person doing this has statistical expertise, a collaboration with a faculty member or Intuitional Research may be helpful)
- ➤ Qualitatively coding data for themes

Finding a place to start with data analysis could be a challenge. If that is the case, find an assessment buddy on campus to talk through what you have and what you need or partner with

Existing Data (continued)

someone from an assessment office, institutional analysis or a faculty member to explore the options. Most of the time, additional expertise in data analysis is not needed (unless you are digging really deep into statistical analysis), but sometimes just receiving help with thinking through how to transform the data is all that is needed.

Checklist: Getting Started with Existing Data

- ✓ Identify what kind of data is helpful for the purpose of the project
- ✓ Brainstorm what data sources are available easily and which sources may be available through various offices on campus (but therefore may take some time to access)
- ✓ Obtain access to needed information *Hint: If you use technology platforms in your office, ask the vendor what data is available and how to extract it.*
- ✓ Collect the data and gather it in one place
- ✓ Organize the data so it can easily be reviewed
- ✓ Analyze the data
- ✓ Report results

Additional Web Resource

NSSE Date Use in Brief: https://bit.ly/3s73uSh

Existing Data (continued)

Reflection Questions: Existing Data

1.	Would the information collected via Existing Data be useful to measure m my assessment question or meet my assessment needs? Why or why not?	y outcome, answer

- 2. What resources (time, human, financial, technology, etc.) are needed in order to use this tool? Are these resources available? If not, what can be adapted to better match your needs?
- 3. What would your timeline look like if Existing Data was used? Does that timeline fit your data needs?
- 4. What unique piece of data or information would Existing Data provide that another tool might not?
- 5. What Existing Data could be used? Do you have access to that data already? If not, how do you get access to the data?
- 6. Ultimately, is Existing Data what you should be using for your assessment purposes? Why or why not?