Vocational Rehabilitation Performance Management:

User’s Guide to Survey Design

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**The Purpose and Benefit of this User’s Guide**

The purpose of the *Vocational Rehabilitation Performance Management: A User’s Guide to Survey Design* is to provide VR agency leaders and staff with a resource for improving performance through enhanced surveying methods among program evaluators and quality improvement specialists. Specifically, this Guide reviews survey design issues and explains different modes utilized to increase response rate and satisfy accessibility issues for persons with disabilities. The authors provide a focus toward responders’ needs so that VR professionals receive data from surveying efforts that are complete, valuable, and reliable.

Much of the information in this Guide is based on the book, *Internet, Mail, and Mixed-Mode Surveys*: *The Tailored Design Method* by Dillman, Smyth, and Christian (2009). These authors practically discuss various survey modalities that have developed over time, and how both their uses and effectiveness have shifted depending on the given cultural norms and available technology at the time.

The authors of the Guide want readers to learn and adopt into practice these strategies for survey design. What follows below are section headings, a description of various topics for readers to study, and resources to assist in the enhancement of surveying within vocational rehabilitation performance management.

**1. Internet, Mail, and Mixed-Mode Surveys**

For nearly 100 years, the State-Federal program of rehabilitation services, which is provided under the Rehabilitation Act of 1973, as amended, has worked to provide vocational rehabilitation (VR) services to individuals with disabilities. The VR Program seeks to empower individuals with disabilities to achieve employment, health, economic self-sufficiency, independence, and social participation. When examining the value and performance of VR systems in achieving these outcomes, surveys have often been used as a means to collect data. Such data has been used to identify patterns, recognize areas for improvement, and determine the future needs of individual VR agencies and the overall VR system.

**How Surveys Have Evolved Over the Years**

Significant changes have occurred over the years with respect to how surveys are conducted and what modes or types of surveys are used. It is crucial for those conducting surveys to be aware of the various survey modalities and what they have to offer. It is important for surveyors to determine which modes would be feasible and best suited for the purposes of the given survey.

In the 1960s, the In-Person Interview was the only generally accepted interview. This type of interview continued into the 1970s and 1980s, along with the addition of telephone and mail surveys. The 1990s, to the present, have seen the development of internet based surveys while still keeping mail and telephone surveys as viable options and to a lesser degree the in-person interview.

Another shift in recent years is the use of “Mixed-Mode” vs. “Single-Mode” surveys. There is no longer the assumption that a one-size-fits-all approach is always best, given that there can be limitations in what a single mode survey may offer, such as in its response rate. Some individuals may feel more comfortable conveying information over the internet or through e-mail; while others who do not have a computer may need to have surveys sent through the mail. The response rate for many telephone interviews has decreased with (1) the decline of land lines, (2) the use of Caller ID to screen out phone calls, and (3) cell phone users not wanting minutes charged to their cell phone bill.

Using some combination of different survey modes may result in an increased response rate. It may also allow more individuals to respond to a particular type of survey based on their disability related needs.

**Specific Types of Survey Modes**

VR agencies and others who study the VR system have a variety of survey modalities to choose from. Some of the choices may be based on the survey’s purpose as well as the target audience. The surveyor may choose a different type of survey when it is directed to VR counselors as opposed to a survey for VR consumers, employers, or VR funded service providers. In addition, the issue of cost-effectiveness may be a factor in determining what and how many survey modes would be feasible to implement.

In-Person Interview

The individual being asked the survey questions is interviewed in person at their home or at another physical location. Participants have the opportunity to answer questions at length and the responses are recorded on paper by the interviewer. Questions may be closed or open-ended or a combination of both. The degree to which the participant feels comfortable with the interviewer may have an impact on the extent or quality of the answers given by the participant.

Mail Survey

The participant is sent a list of survey questions to their home and asked to send their response back typically in a self-addressed stamped envelope. Questions may be 1) closed- (i.e., requiring a specific response); open-ended (i.e., affords the opportunity to respond at length); or a combination of both; but, participants may have less opportunity to answer questions in depth as opposed to the in-person interview. Response rates are dependent on having a list of correct addresses for participants in their data base. Mail surveys may be sent out once or done in multiple mailings.

Telephone Survey

Telephone surveys can be automated or conducted by live interviewers. The Touchtone Data Entry (TDE) system is a computer generated automated survey that involves the participant listening to a series of closed-ended questions and being prompted to answer the questions by touching certain numbers on their telephone keypad. The Interactive Voice Response (IVR) is when a computer administers the interview, and the participant can answer closed-ended questions vocally, as well as through registering the responses on the keypad. VR agencies typically do not have the type of technology required for the TDE and IVR surveys.

Telephone surveys may also be conducted by live interviewers, who contact the participant on their landline telephone or cell phone asking a series of scripted questions. This type of telephone interview may allow for both closed and open ended questions.

Computer Assisted Personal Interviewing (CAPI)

The interviewer enters the responses of the participant directly into a computer program on a laptop computer or other small computing device.

Computer Assisted Self-Interviewing (CASI)

The participant enters their responses themselves into their computer or hand held device.

Email Surveys

Surveys may be sent directly to a participant’s email address. Participants are asked to complete the survey and email the survey back to the Interviewer. The survey may be sent as an attachment but with the capability of the participant typing in their responses. Questions can be closed, open-ended or a combination of both. Response rates are contingent upon participants having both an email address and computer access.

Fax

Despite the decreased use of fax machines, some surveyors offer the option of allowing participants to return their surveys by fax—for those who do not feel comfortable responding electronically.

Internet Surveys

Surveys can be hosted on a website. Some VR agencies for example have their customer satisfaction survey posted directly on their website, offering a centralized means to reach participants and collect data. Survey questions can be closed, open-ended or a combination of both. Response rates are contingent upon participants having computer access.

Not everyone has the access or ability to respond via the Internet. Be cautious when conducting internet-only data collection as it can potentially select-out those individuals who lack access or ability to use that medium.

**2. Features, Pitfalls, Tips**

**Encouraging Participant Participation**

Provide Information about the Survey

Responses are much more likely to be obtained if someone knows who is soliciting their response. Likelihood of a response is increased greatly if the individual has had a relationship with the surveyor. For instance, if a university is performing a survey for a vocational rehabilitation agency, then they should provide that information to the participant. If they only state that they are a university then the potential participant will not be likely to assist with the survey. However, if the individual has a relationship with the surveyor then they will want to help the VR agency as they have been helped.

It is also important to provide information of how the survey will be used. Just stating it will be used for research purposes does not motivate the participant to give their time for a response. However, if the agency is using the information to assist other individuals with disabilities to become employed, for instance, they would be more likely to take the time for a response as they will feel they are contributing to a worthy cause.

Another bit of information to provide is a contact name, phone number and email. The potential participant may have concerns about the validity of the survey or just want to speak to someone for many reasons. Another reason to provide a contact person is in the event the participant wants to update their own phone number or email. Today’s society is very mobile and maintaining contact with consumers is a major challenge. Therefore, agency contact information can be helpful to the participants.

Ask for Help or Advice

Again, soliciting someone’s advice sounds intrusive, but when you ask for their assistance it sounds like you value their opinion. The participant is doing you a favor by providing their input in to your survey. When you ask someone for their advice it shows that you find importance in their knowledge and experience.

Thank Participants

“You get more flies with honey” as the saying goes. It is amazing what a little gratefulness will do. Be thankful that the potential participant even opened the letter or email. Politely ask for just a moment of their time. Be appreciative of what they might do for you and your agency. Be humbled by the fact that their time is a very valuable commodity.

Support Group Mission and Values

State the mission and values of your agency. Align the purpose of the survey with the mission of the entity to whom you are providing the research. Inform the participant how this helps to accomplish the goals of the agency. By providing their input they help to further the agency’s mission and vision.

Make the Questionnaire Interesting

Even online surveys have many formats to choose from. No one enjoys reading black-and-gray colored surveys. While assuring the accessibility needs of your participants, keep the material interesting. Maybe provide an inspiring story to exhibit how the information could be utilized to help others. Something that is pleasing to the eye and interesting to read might actually enrich the participant’s life if for a fleeting moment.

Use Plain Language

The participant is not as familiar with your agency as you are. Be especially mindful of acronyms. Even if a consumer was a VR consumer it should be spelled out that they were served by the Office of Vocational Rehabilitation, for instance. Make it simple to read keeping in mind the varied educational levels of the participants.

Similarly, the answer choices should not be ambivalent. When using a Likert scale (i.e., participants specify their level of agreement or disagreement on a balanced ‘agree-disagree scale’ for a set of items) avoid using choices which could mean the same thing. One possibility would be to provide quantitative examples of each answer choice. For instance, is “most of the time” equivalent to 75% of the time? Be sure that different participants would all view the meaning of the questions and answers in the same way, no matter what their knowledge base.

Logical Sequencing of Questions

This is an area where you may need to test your survey before publishing. Provide the survey for someone else to complete to ensure it makes logical sense. Similar questions should be grouped on a page and questions should follow some kind of order, avoiding extra questions. On an internet survey, for instance, you can provide logic within your questions. That way, if they respond that they are not a former consumer, for example, then you shouldn’t ask them to name their counselor.

In addition to sequencing of questions there is also sequencing of answers. Answers should be equally spaced and in order. If you are asking their age the possible answers should provide the information you need. If you want to know whether someone is an adult you might want the cut-off to be 21 year-olds. If you asking where they live or their zip codes they should be in alphabetical or numerical order so that their choice can be quickly and correctly located.

Create a System of Incentives and/or Rewards

*Tangible Incentives*: Remember, you are asking someone to give something (their time) for nothing in return. If it is possible to provide an incentive or reward then this should be pursued. However, with many fiscal restrictions this might not be possible. In this situation, the agency would need to be more creative while following all intents and purposes of their governing bodies. Some agencies have been able to provide snacks or a small meal in return for providing input at an agency forum.

*Non-Tangible Incentives*: This is related to the issue of providing information as to how the survey will be used. When the participant feels like they are helping others then it is the same as providing community service. Helping future consumers of an agency is always an enticing reason to complete a survey and give something back to an agency that has helped them.

Research has shown that tangible incentives have been more effective than intangible incentives for increasing survey response rates and survey completion.

**Decreasing Barriers to Participation**

Make it Convenient to Respond

If a potential participant has to do more than click on a link, open an envelope, or pick up the phone in order to respond, then it is unlikely they will. The links should be tested on different devices and different browsers to determine whether they work flawlessly. For instance, if the URL has an “https” instead of just “http” then they might not be able to open it based on the security settings of their PC or device. Likewise, if someone is responding on a Windows Phone vs. an iPhone, then the survey may look very different. This would be another reason to have a variety of persons test your survey before publishing.

Use Language that is Respectful and at the Participant's Level

Be careful not to use a vocabulary beyond that of the consumer’s education. Since you cannot tailor the survey to each participant just use simple language – generally not beyond a 4th-grade education. At the same time, simply said, be politically correct. Write the questionnaire as if it were published and scrutinized in a newspaper or on a talk show. No matter who your consumers are, they come from all walks of life, and the last thing you would want is to offend any of them.

Make the Questionnaire Short

Keep in mind that someone is volunteering their most precious asset – their time. Therefore, do not become overly wordy and do not require more than 5-10 minutes of their time. Ask yourself “why do we need this question” and use each question sparingly. If the survey is too long then you have already skewed your results. Only someone who really has issues (good or bad) is going to be willing to respond to a long survey. You could say that the length of the survey is directly-related to the strength of the participants’ convictions or concerns.

Make it Easy to Complete

Basically only a few answer choices are needed for each question. These choices should be easy to read, understand and answer. A simple click or checkbox, without much thought needed, will ensure the best answers. It is always helpful to have a few open response questions for someone who has legitimate concerns. However, don’t make empty promises. Make sure that you have text analysis software or personnel ready to analyze all those comments.

Minimize Requests for Personal Identification or Other Sensitive Information

Similar to the recommendation about making each question count, do not gather personal unnecessary information. You should ensure the participants that their responses are totally confidential and their anonymity is maintained unless they volunteer that information. If, for some reason, you need to tie the responses back to a case number or a district then use a number on the survey which is only used for that purpose.

Pilot All Surveys with a Small Group First

Test, Test, and re-test. Once the survey has been developed, obtain input from a colleague. Then, find other staff to look at it and complete the survey. Then, use a few individuals more similar to those who will be completing the survey—each time asking for input and revising the survey.

**Summary**

Remember that as a public service entity your greatest commodity is your customers. Value them, their time and their opinions. Keep your agency’s vision in focus and be mindful of what you are trying to accomplish with your survey. Consider the background, needs, and abilities of anyone who might be participating in your survey. Without their opinions, you cannot fulfill your agency’s mission.

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| **New VR Program Evaluators**  Performance management in VR is everybody’s business—improvements in process and outcome are the program evaluator/quality improvement specialist’s (PEQI) forte. Certainly, new PEQIs need to know the outcomes that Vocational Rehabilitation agencies commonly evaluate. Below are some of the common practice questions, gathered from reviewing various survey resources posted on the Summit Group website ([www.vocational-rehab.com](http://www.vocational-rehab.com), click on the Resources tab), to provide new evaluators a place to start:   1. Did clients achieve the employment outcome expected? 2. Did vocational rehabilitation counselors or the program respond to their needs in a timely manner? 3. Were they treated with dignity and respect at all times? 4. Was VR staff culturally sensitive? 5. Were they knowledgeable regarding the client’s disability? 6. Did clients receive Informed Choices, which often includes informed choices of both services and service providers? 7. Would they recommend VR services to others in their community? 8. Did VR help them to meet their employment goals? |

**3. Technology Considerations**

**Technological Capabilities of Survey Population**

A primary concern prior to selecting a survey type should be the technological capabilities of the population you are trying to reach. The aggregate technological capabilities of your staff likely differ from those of your consumer base across a number of dimensions: the ability to access the Internet is but one example. Make sure that the survey type you employ is a match with the capabilities of your identified population for study.

**Views of Technology Held by Survey Population**

In general, there are generational differences in the way individuals view different types of survey approaches. While younger participants may feel very comfortable utilizing web survey technology, older individuals may approach Internet based surveys with distrust. Use caution in restricting yourself to one mode if you wish to reach a wide range of individuals.

**Survey Logistics**

Planning logistical elements ahead of time can help alleviate common issues experienced by participants and survey administrators alike. A couple common issues to consider prior to survey launch include confidentiality and responsiveness.

Confidentiality and Privacy

Electronic surveys offer the opportunity to collect a wide array of demographic information on participants. To align confidentiality settings with the goals of your survey, you may have to decide between complete confidentiality on one end of the spectrum (promoting honest responses/protect identity of consumers) and utility (e.g. collecting detailed information on age, sex, disability, etc.). The right balance will be informed by ethical code requirements, the sensitive nature of the survey items and the need being addressed by the survey itself.

Responsiveness

Even a fully accessible, well-built survey can still be plagued by errors beyond your control.

Prior to sending out an electronic survey, ensure you have contingencies in place to address any issues your participants may have as they attempt to complete the survey. A single point of contact and hard timelines for response to survey inquiries can be helpful. Consider offering multiple modes of contact (email, telephone) for individuals experiencing issues so they can communicate in their preferred mode.

**Internet Browsers and Market Fragmentation**

Competition in the web browser market is arguably stronger than ever, especially considering the recent explosion in mobile browser applications for the smart phone market.

Coupled with the different screen sizes and resolutions of various screens and monitors, it is essentially a guarantee that individuals will not share the same Internet based survey experience. While Internet browser standards exist, they serve as guidelines toward “open, accessible and universal” practices rather than rigid requirements with accompanying penalties (<http://www.webstandards.org/>).

Browsers are at varying levels of compliance (e.g. Microsoft Internet Explorer is less compliant, sacrificing adherence to standards for a faster browsing experience). Figures 1 and 2 illustrate the current trends and usage of across various desktop and mobile browsers respectively.

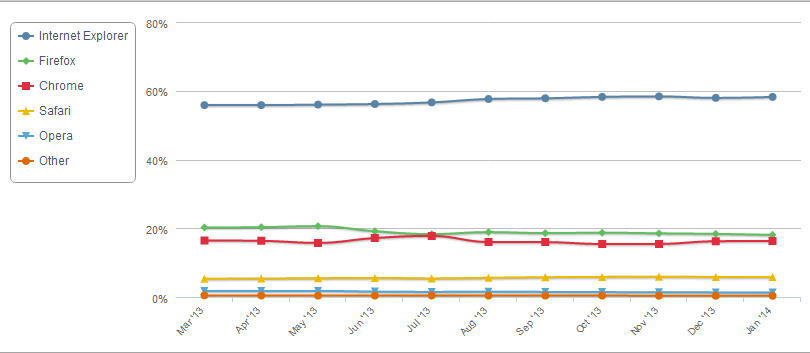


Figure 1. Internet Browser Desktop Top Browser Share Trend

(Retrieved on 2/10/2014 from [www.netmarketshare.com/netapplications.com](http://www.netmarketshare.com/netapplications.com))

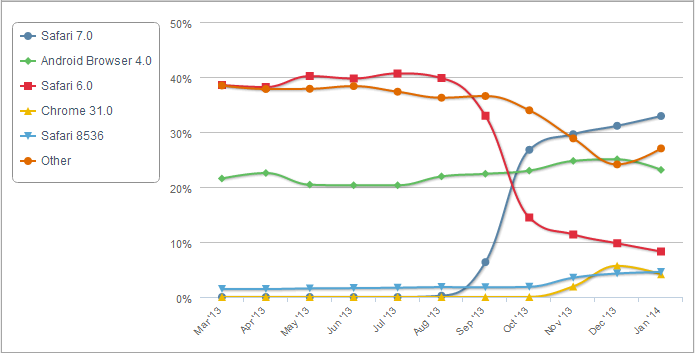


Figure 2. Internet Browser Mobile/Tablet Top Browser Share Trend

(Retrieved on 2/10/2014 from [www.netmarketshare.com/netapplications.com](http://www.netmarketshare.com/netapplications.com))

To further complicate the issue, older computers may not be able to run up-to-date browsers and many users do not update the software they have on a regular basis, if at all. This further fragments the population across the various browser versions available. Figure 3 illustrates this fragmentation using the most popular desktop browser (Internet Explorer) alone.

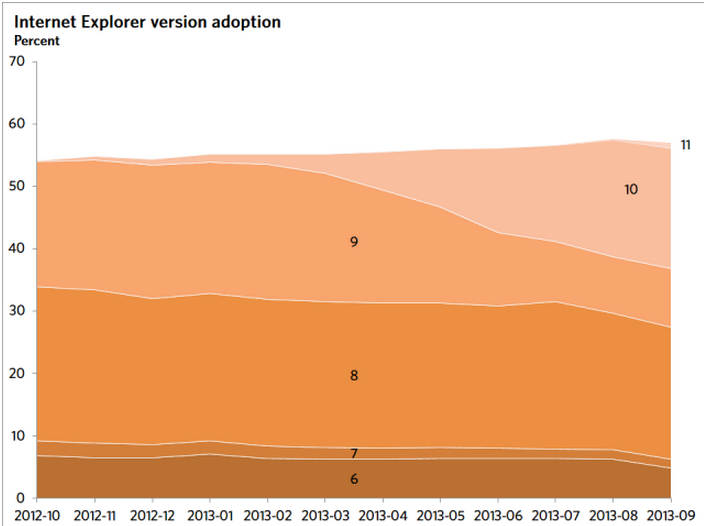


Figure 3. Internet Explorer version adoption

(Retrieved on 2/10/2014 from

<http://arstechnica.com/information-technology/2013/10/internet-explorer-6-usage-drops-below-5-percent-in-september/>)

The smart phone/tablet market is primarily divided between Apple’s iPhone/iPad, Google’s Android OS and Microsoft’s Windows phones and tablets. Apple’s ‘walled garden’ approach ensures far less fragmentation than hardware operating on Android, yet fragmentation still exists across all operating system by device generation with older devices losing supports like regular operating system updates and older hardware not meeting base requirements to run newer software.

This is also present in the desktop environment. Microsoft ended updates and support for Windows XP on April 8th, 2014. As of December 2013, NETMARKETSHARE ([www.netmarketshare.com](http://www.netmarketshare.com)) estimates 46.64% of worldwide users still run Windows 7.

It can therefore be beneficial to know not only which browsers are supported by whatever Internet based survey application you are employing, but the versions supported as well. Here are the current browsers and version support pages for three major Internet based survey sites:

* Survey Gizmo: <http://www.surveygizmo.com/old-ie/>
* SurveyMonkey: <http://help.surveymonkey.com/articles/en_US/kb/What-browser-versions-do-you-support>
* Qualtrics: <http://qualtrics.com/university/researchsuite/research-resources/other-resources/faqs/#webbrowser>

Taken together, it is practically impossible to test all of the potential combinations of operating systems, browsers and versions prior to implementation of a web based survey. In combination with the information provided by various survey companies in the links above, testing your survey on the current version of the most used browsers can be helpful toward identifying any other browser specific issues and promoting a uniform survey experience for your participants.

**Telephones**

As cellular subscriptions continue to take market share from landlines, it is important to note a corresponding shift in unlisted numbers: there is no current industry wireless 411 directory (fcc.gov). A blind telephone survey conducted from publically available numbers will likely yield a sample quite different from the general population as you will be surveying ‘people with landlines’ rather than randomly pulling from the population as a whole.

The increasingly ubiquitous caller ID feature can also skew representation as many individuals will not respond to an unrecognized telephone number. Dillman, Smyth and Christian (2009) estimate 18% of Americans do not maintain a landline telephone. Use caution when exclusively drawing samples from telephone directories as they may not be representative of the population you want to sample.

**Disability Specific Technological Issues**

Section 508 technical standards specifically address web based applications. Most traditional survey question types are available through Internet based survey products, however not all question types are 508 compliant.

If you are employing an Internet based survey application, make sure your question types are supported, or alternative data collection modes are available to compliment your online survey.

For more information on 508 standards and compliance, the U.S. Government 508 site can be found here: <http://www.section508.gov/>

Despite claims of 508 compliance, none of the top three Internet based survey applications are fully compliant across all question types. In general, the more complex the question type, the less likely 508 accessibility standards are supported (e.g. ranking type questions where the participant is required to rank a set of items in order of importance/relevance are particularly problematic). Prior to sending out a survey, it is important to ensure your questions are either 508 compliant, or contingencies are in place to provide alternate methods for response where questions types may create difficulties for participants who use accessibility software.

**Links to 508 Accessibility Compliance Statements**:

The following links include language on which question types are compliant across each of the sites listed.

* Survey Gizmo: <http://surveygizmo.helpgizmo.com/help/pdfexport/id/517eb936fe775af13f000003>
* SurveyMonkey: <http://help.surveymonkey.com/articles/en_US/kb/Are-your-surveys-508-compliant-and-accessible>
* Qualtrics: <https://qualtrics.com/university/researchsuite/advanced-building/advanced-options-drop-down/check-survey-accessibility>

**4. Accommodating Disability**

Section 508 of the Rehabilitation Act of 1973 as amended (*United States Code,* Title 29, Section 794d) requires that individuals with disabilities who are members of the public seeking information or services from a federal agency have access to information that is comparable to that provided to members of the public who are not individuals with disabilities, unless an undue burden would be imposed on the agency.

As advocates for persons with disabilities, those of us working within vocational rehabilitation systems should always be cognizant of the Rehabilitation Act and accommodations in the work we do. Surveys are one of the activities for which the Rehabilitation Act applies and for which we should be purposeful in our attention to design and development in order to allow equal access for all individuals and to encourage the highest rate of feedback possible.

*Some common guidelines to consider allowing for disability accommodations when creating surveys are:*

* Provide text equivalents for every non-text element (ex. Images, graphical representations etc.).
* Ensure all information conveyed with color is also available without color to compensate for color blindness.
* Make sure that any audio features have alternative tags that allow those with hearing difficulties to read what the audio is attempting to convey to participants.
* Develop logical ways to navigate pages without using a mouse for those unable to do so.
* Use systems compatible with speech recognition software
* Use systems compatible with screen readers
* For persons with hearing loss needing to view web videos, provide captioning or interpreters
* For persons with vision problems, allow for the ability to modify font size, color contrast, etc.
* For persons with manual dexterity, websites will need to support keyboard alternatives for mouse commands
* Be leery of time responses as individuals with manual dexterity difficulties, intellectual disabilities, vision conditions, etc. may need more time to respond
* For persons with visual disabilities, images, photographs, etc. need corresponding text describing the image. In addition, use navigational headings, clear labels, visual CAPTCHAs (complete automated public Turing Test to tell Computers and Humans Apart) and links to facilitate navigation.

*Note:* It is important that once a survey has been designed that time is allowed to pilot/test the survey before sending it out to ensure the tools used above are working.

If it is impossible to make a survey accessible to all persons, provisions need to be made for reasonable accommodations and/or alternative formats to address the inability of participants with a disability to use or access an on-line system.

*Some common accommodations or alternative formats include:*

* Braille
* TDD’s
* Telephone relay systems
* Readers
* Interpreters

These considerations are consistent with principles of universal design; accommodations intended to improve accessibility for one population may benefit the accessibility of another. For example, designing surveys which respond to mouse, keyboard, and touch commands will allow greater accessibility for individuals with dexterity demands while simultaneously improving convenience for participants well-versed in mobile computing. Similarly, providing captioning of audio features for persons with hearing loss may also improve accessibility for individuals living with autism who experience hypersensitivity to audio stimuli. Creating surveys based on the aforementioned guidelines and the principles of universal design engages agencies in continuous process improvement by which accessibility gains in one population lead to accessibility gains throughout diverse populations. With increased accessibility, agencies can expect improved validity of survey data, higher response rates, and better rapport between agencies and survey participants.

The importance of building rapport with survey participants is emphasized in *Removing Barriers to Survey Participation for Persons with Disabilities* (Mitchell et al., 2006). Letters sent in advance of surveying which describe the purpose, design, data collection methods, and the voluntary nature of a survey are linked with greater participation. Additionally, detailing how participants’ personal information and confidentiality will be protected while offering phone, internet, mail, and in-person “help-desk” resources also improves response rates. Pairing this advance communication with including individuals with disabilities in the process of survey design is shown to enhance survey accessibility, survey participation, and the established legitimacy of the agency.

Agencies seeking to improve internet and mixed mode survey accessibility for diverse populations of individuals with disabilities may benefit from ubiquitous and/or cloud-based computing systems such as Global Public Inclusive Infrastructure (GPII). GPII offers users customizable profiles which are carried by the user across devices when accessing the Internet. The profiles adapt to the unique abilities and preferences of the individual, creating customized and dynamic systems of assistive technologies. Such ubiquitous and cloud-based systems may transform Internet accessibility for individuals with disabilities. Along with improved quality of life and social mobility, survey accessibility and participation of individuals using these systems may improve dramatically.

Agencies may wish to view survey accommodations and accessibility as a holistic quality approach. This holistic approach would be embedded in the ongoing rehabilitative process, engaging participants directly in the design, pilot testing, and accessibility improvements of the surveys in which they participate.

*Some helpful resources:*

* <http://www.section508.gov/>
* [www.w3.org/WAI/](http://www.w3.org/WAI/)
* [www.webAIM.org](http://www.webAIM.org)
* [www.dol.gov/ofccp/regs/compliance/faqs/dir281faqs.htm#q4](http://www.dol.gov/ofccp/regs/compliance/faqs/dir281faqs.htm#q4)
* <http://www.nacua.org/documents/ADAInternet.pdf>
* <http://www.ada.gov/anprm2010/web%20anprm_2010.htm>
* <http://digitalcommons.ilr.cornell.edu/edicollect/191/>
* <http://gpii.net/>

**5. Guidelines for Creating Questions**

**Visual Design**

The visual design of a survey is important because it influences how the participant answers the questions. How visual information is displayed is crucial, and contributes more toward obtaining desired responses than the wording of questions and instructions. There are 3 main visual design concepts that guide question design:

Design Elements – communicate information to participants

* *Words*: The fundamental sources of meaning that help participants understand what is being asked of them.
* *Numbers* are used to convey meaning and sequence or order to participants.
* *Symbols*: Figures that add special meaning based on what they represent to participants.
* *Graphics:* Shapes and visual images that can be simple or complex and convey meaning to participants.

Design Properties – modify the visual presentation of elements and the meaning participants assign to them

* *Size*: Changes in the size of elements influence how elements are perceived and whether they stand out visually.
* *Font*: Changes in the shape and form of elements influence the legibility of words and how elements are perceived.
* *Color and Shading*: Changes in shading and color influence how elements are perceived and whether they stand out visually from the background.
* *Location*: How near or far elements are from one another (the spacing and alignment) influences whether they are perceived as related or unrelated.

Grouping Principles – guide how participants perceive relationships among information

* *Symmetry*: Elements that are organized into the simplest, most regular, symmetrical objects will be easier to perceive and remember.
* *Proximity*: Placing visual elements close together will cause them to be perceived as a group.
* *Similarity*: Elements sharing the same visual properties will be grouped together.
* *Connectedness*: Elements connected by other elements will be grouped together.
* *Common region*: Elements within a single closed region will be grouped together.
* *Continuity*: Visual elements that can be seen as continuing smoothly will be perceived that way.
* *Closure*: Elements that together create a “closed” figure will be perceived that way.
* *Common fate*: Elements that move or imply movement in the same direction will be grouped together.

**Guidelines for the Visual Presentation of Survey Questions**

Components of the three design concepts are incorporated into the guidelines below:

1. Use larger and/or darker print for questions and smaller and/or lighter print for answer choices and answer spaces. Using contrast (e.g. **bold print**) helps separate the question stem from the response options. This helps the participant to recognize and process parts of the question.
2. Use spacing to create subgrouping within a question. For example, a blank line can be added after each question stem with response options indented in a vertical column. This applies the principle of proximity which states that items arranged close to each other will be perceived as belonging together and items located farther apart will be perceived as not belonging together.
3. Visually standardize all response options or answer spaces so that none of them stand out from the others making them more likely to be seen and selected. For example, using check boxes all of the same size creates uniformity and helps to ensure the response options are processed in the same way by each participant.

|  |
| --- |
| The following example illustrates guidelines #1 thru #4. |
| **To what extent do you agree or disagree with implementing a 4-day work week for the outreach offices only?**  ☐ Very much agree  ☐ Somewhat agree  ☐ Neither agree nor disagree  ☐ Somewhat disagree  ☐ Very much disagree |

1. Emphasize important elements and de-emphasize unimportant elements. For example, underlining a word or phrase will draw the participant’s attention and convey that “this is important information.” Likewise, if a word or phrase is no more important than any other word or phrase, don’t draw attention to it.
2. Use design properties with consistency and regularity throughout the survey. *This is probably the most important guideline to follow*. A good rule of thumb is to use each design element or property for only one purpose. Using the example above, a well-designed survey would use bolding only for the question stem, white boxes only for answer spaces, and underlining only to emphasize important words.
3. Make sure the words and visual elements that make up the question send consistent messages. Sometimes, verbal and visual elements can contradict one another, leading to errors in responses. It is important to step back and look at the question construction to ensure that both the words and the visual design of the question are sending a consistent message about the meaning of the question and the response task.

In the following example, a survey designer sorted related response options into two groups based on their content. However, the sub-grouping caused participants to make mistakes in answering the questions where the survey needed to accept only one answer.

|  |  |  |
| --- | --- | --- |
| The following example illustrates guideline #6. | | |
| **18. What best describes the benefit of the Student Recreation Center? Please select the best answer.**  Health Benefit   * The variety of physical fitness offerings * The health and wellness offereings * Helps reduce stress   Academic Benefit   * Improve academic productivity * Enhance leaning experiences * Provides information for students to… * Don’t Know |  | **18. What best describes the benefit of the Student Recreation Center? Please select the best answer.**   * The variety of physical fitness offerings * The health and wellness offereings * Helps reduce stress * Improve academic productivity * Enhance leaning experiences * Provides information for students to… * Don’t Know |

1. Integrate special instructions into the question where they will be used, rather than including them separately. Frequently, it is necessary to provide a special instruction to clarify a question, but this can lead to the undesirable practice of placing instructions outside of the question and emphasizing them with boxes or perhaps a different color. As observed in the following example, free standing instructions tend to be skipped entirely. Thus, instructions need to be strategically located where they will be used.
2. Separate optional or occasionally needed instructions from the question stem by font or symbol variation. Requiring the participants to read through a great deal of material that does not apply or that can be skipped without negative consequences encourages the habit of skipping words and phrases. A distinction should be made between words that are essential for every person to read and those that may be needed by only some participants by using either ***italics***or a symbol variation (e.g., putting it in parentheses).

|  |  |  |
| --- | --- | --- |
| The following example illustrates guidelines #7 and #8. | | |
| **8. Have one-on-one meetings with professors contributed significantly to your WSU education?**   * Yes * No   ***If you haven’t had many one-on-one meetings, just skip to Question 9.*** |  | **8. Have one-on-one meetings with professors contributed significantly to your WSU education?** *If you haven’t had many one-on-one meetings, just skip to Question 9.*   * Yes * No |

1. Organize each question in a way that minimizes the need to reread portions in order to comprehend the response task. This guideline is for efficiency for the participant. Sometimes, a question includes a great depth of unnecessary or irrelevant information from which the participant may become lost or frustrated and, therefore, gives a wrong answer or no answer at all. Each question should allow the participant to know, at the beginning, what they are being asked. Remember that no amount of visual redesign can compensate for poorly worded questions or unorganized information which, once read, leaves the participant unclear about precisely what to do.
2. Choose line spacing, font and text size to ensure legibility of the text. Even a very well worded question can be difficult for the participant to process if it is not designed in a legible way. Enhancing legibility means choosing an appropriate font, font size and line length.

* *Fonts*: Use serif (e.g., Times New Roman, Garamond, Century, Georgia) or sans serif fonts (e.g., Arial, Verdana, Tahoma, Latha).
* *Font size*: 10- or 12-point font is a good rule of thumb, but a larger font is good for older populations or people with visual impairments.
* *Line Length*: a more moderate line length of 3 to 5 inches is recommended

**Elements of Wording**

In creating surveys, there are two basic kinds of questions:

* open-ended questions where the survey-creator does not provide the specific answer choices and
* closed-ended questions where the survey-creator provides the specific answer choices from which the survey-taker may choose

The survey-creator chooses the type of question based on the nature of the information to be solicited.

Open-Ended Questions

1. Requests for Numerical Responses: Open-ended questions are used when the requested response is a number. When you ask for a numerical response, be clear what the unit of measure should be. Better yet, label the answer space with the unit (days, hours, year, etc.) and, whenever possible, the range of the appropriate possible answers. Also, the survey-creator can help the participant to answer accurately by providing a space that correctly fits the expected response.

EXAMPLE: When requesting a date, the creator might use spaces with room for two digits, two digits, and then four digits.

1. Requests for a List

The survey-creator can design the question in a way that avoids extraneous information and run-on responses. Unless the creator wants every possible response to be provided, good practices include requesting a specific number of answers and creating that number of one-line text-boxes, each the size of the requested response. By labeling each box with the category of response, the likelihood that the response will be accurate is increased.

EXAMPLE: For the question, “Please list the names of your three favorite cereals,” you would label the three answer boxes:

Name of Cereal 1

Name of Cereal 2

Name of Cereal 3

1. Requests for Description and Elaboration

The use of descriptive, open-ended questions requires more time on the part of the participant who provides the information and more time on the researcher who must process and code the response. For these reasons, it may be advisable to limit the number of descriptive, open-ended questions. When determining the mode of survey design, not that evidence shows that survey-takers who are responding on a computer provide better, fuller responses than individuals hand-writing their responses.

In general, participants will provide more complete answers when they are motivated to respond. A simple statement indicating the importance and goal of the question may increase the length of the response. Provide sufficient space for the response. When creating an online survey, indicate that the textbox will allow scrolling, so that the response may be larger than the visual box, if the survey program will allow it. Some new, online survey programs will allow interactivity to enable the survey to probe for additional responses.

EXAMPLE: In the previous question, you indicated that the issue below was important to you in making an automotive purchase. (Then, the text of the participant’s previous response will appear.) What other issues are important to you in making an automotive purchase?

Closed-Ended Questions

1. General Guidelines for closed-ended questions

To get an unbiased response, closed-ended questions should state the issue in both positive and negative terms. The question states, “Do you agree that….” pushes the participant towards agreement in a way that, “Do you agree or disagree that…” does not. When providing a list of responses, all reasonable responses should be included. When the participant feels unable to select an accurate response, the question may be skipped. Also, to avoid confusion, the list of possible responses should be mutually exclusive. Exclusivity can be avoided by providing answers that do not cross categories:

EXAMPLE: When asking “how” the participant first heard about an event, list as full a range of interpersonal and media possibilities, but avoid locations that would answer “where” and could lead to answers that are not mutually exclusive.

EXAMPLE: When asking for the participant to pick a numerical range, the numbers should not overlap (1-10, 11-20, 21-30, etc.) rather than (1-10, 10-20, 20-30, etc.).

Categories should also be continuous: (up to $1.00, $1.01 up to $2.00, $2.01 up to $3.00, etc.)

When listing possible responses to closed-ended questions, the responses should be spaced in such a way as to not emphasize one response over another by crowding or giving extra room to some responses.

1. Nominal Scales

Nominal scales are used when the survey creator wants a qualitative response. The participant may be asked to select between two or more responses. The responses should be organized in a way that would make sense to the participant (e.g. alphabetically, by location, by type).

Asking a participant to rank items (e.g. such as in order of importance) forces the participant to remember the list while making choices, especially if the list is long. A way to avoid this difficulty is to create individual questions that include each possible paired response. Another means of making the ranking process easier is for the participant to physically move the items into place either by dragging and dropping a computer-based survey or using stickers in a paper survey.

In order to avoid bias, possible answers to the closed-ended question should solicit equal emotional response. Also, by randomizing the order in which the responses are seen or heard may prevent bias.

When asking individuals to “check all that apply,” evidence has shown that there are fewer positive responses than when the participants are asked to respond to a forced-choice (yes or no) for each item. In creating a survey, the creator can assist the participant by varying the shape of the answer space (e.g. circles or squares) to indicate whether a single or multiple answer is allowable. Some web-based programs, including Survey Monkey, automatically change the answer space.

EXAMPLE: Rather than asking which of the follow restaurants you have patronized in the past year (followed by a long list), you could rephrase the question to ask if the individual has patronized each of the restaurants:

|  |  |  |
| --- | --- | --- |
|  | Yes | No |
| Pizza Hut |  |  |
| Little Caesar’s |  |  |

1. Ordinal Scales

Ordinal scales measure gradation. They may be unipolar, starting at a “zero” value with options that increase, or bipolar, with the “zero” or most neutral value in the center with the values on either side going in opposite dimensions. In constructing an ordinal scale, the survey creator should keep in mind individuals respond to the relationship between answer values, the order of responses, and the lay-out. The number of values from which the participant may choose can vary; however, participants can only keep a small number of possible responses in their heads. For a bipolar scale, 5 or 7 values are optimal. For a unipolar scale, 4 or 5 values are optimal.

The survey creator may use general (direct) construct or construct-specific variables:

|  |  |  |
| --- | --- | --- |
| EXAMPLE: | |  |
| Do you agree or disagree that the office is accessible?   * Strongly agree * Somewhat agree * Neutral * Somewhat disagree * Strongly disagree | How accessible was the office?   * + Very accessible   + Somewhat accessible   + Neutral   + Somewhat inaccessible   + Very inaccessible   + Don’t know   + No answer | |

Because participants assume that the middle value is “average,” provide equidistant and equal number of options on both sides of the neutral mid-point. If you have non-substantive categories such as “Don’t know” or “No answer,” the categories should be visually/spatially separated from the substantive categories (see the second part of the example above).

Sometimes, ordinal scales are only labeled on the ends. While this is particularly attractive for phone interviews, it has the drawback of leaving it up to each participant to place a value on the inside response categories. Research has shown that fully labeled scales elicit a more positive response while labeling only the end-points has the opposite result.

When it can be avoided, use verbal responses rather than numerical values. Numerical values may artificially influence the participant. If numerical values are used, higher values are generally associated with a more positive effect; however, it is more important to be clear when describing the meaning of the numerical response values and being consistent throughout the survey.

Place responses equidistant from each other either vertically or horizontally. It is preferable to have either one row or one column. Participants expect the most positive category to be first/highest and can respond most quickly to information presented in that manner.

|  |  |
| --- | --- |
| EXAMPLE: |  |
| Presenting options vertically   * Excellent * Good * Poor | Presenting options horizontally  Excellent Good Poor |

**6. Mixed-Mode Survey Guidelines**

**The Rationale for Using Mixed Mode Surveys**

A mixed mode survey design may be needed when the desired results cannot be obtained by the use of a single mode. Dillman, Smyth, Christian (2009) have identified the following factors that can result from the use of a mixed mode approach. This could include one or more of the following:

* Lowered Costs- Surveys can begin with the utilization of less expensive modes and then move onto more expensive modes for individuals who have not yet responded to the Survey.
* Improved Timelines- Mixed mode surveys may allow for a faster collection of responses. For example, surveys will be sent out in several different modes such as mail, telephone, web etc. depending on the mode most convenient to or preferred by the participants. Offering a preference of mode, can increase the speed of response rate. The use of different modes can also be helpful in reducing the length of time needed to complete any needed follow-up.
* Reduced Coverage Error- Mixed mode surveys allow for a broader range of responses when a single mode cannot adequately cover the population of interest or when specific types of contact information are not available.
* Improved Response Rate and Reduction of Non-Response- This could include methods such as offering a second mode or even third mode when an initial mode did not receive a response.
* Reduce Measurement Error- An example of this would be allowing sensitive questions to be answered in a mode that allows for the participant’s privacy such as entering responses on a computer even though some of the questions are asked in a telephone or in person interview.
* “Skip-logic Capability”- “Skip logic” is a tool available through SurveyMonkey (called “Show-When logic” in Survey Gizmo) that enables the creator of a survey  to automatically send participants to a future question or page in the survey based on the answer choice they select.

The efficiency offered through “skip-logic” implementation eliminates extraneous items when unnecessary, shortening the survey and helping to combat survey fatigue and attrition on the part of the participants.

There are four major ways that modes are often mixed, each of which has quite different effects on the overall results (Dillman, Smyth, Christian, p. 307, see Table below):

**Types of Mixed Mode-Surveys and their Implications**

|  |  |  |
| --- | --- | --- |
| **Type** | **Motivation** | **Limitations** |
| 1. Use of one mode to contact participants and to encourage response by a different mode  Example: Calling participants to advise them that a survey will be mailed to them to complete. | * Improve response rates * Reduce coverage and nonresponse | * Increased implementation costs |
| 2. Use a second mode to collect responses for the same participants for specific questions within a questionnaire  Example: An interviewer enters responses into a hand-held device and asks the participant to use a laptop to self-enter responses to other questions. | * Reduce measurement error * Reduce social desirability bias for sensitive questions | * Increased design costs * Increased nonresponse if participant must respond by other mode at a later time |
| 3. Use alternative modes for different participants in the same survey period | * Improve response rates * Reduce coverage and nonresponse * Reduce survey costs | * Increased design costs * Measurement error from mode difference that may be confounded with difference among subgroups |
| 4. Use a different mode to survey the same participants in a later data collection | * Different modes become available to survey participants * Reduce survey costs | * Increased design costs * Measurement error from mode differences that impact the ability to measure change over time |

**Important Considerations When Using Mixed Mode Surveys**

When considering the use of a mixed mode survey design, it is important to keep in mind the possibility of measurement error. This error can result from the fact that individuals may answer questions differently depending on the mode being used. The basic factors that produce different responses are the presence of an interviewer, oral vs. visual communication, and changes in question construction across different modes.

*Some of the specific factors to consider*:

* With interviewer-administered surveys, there may be more opportunity for the participant to answer in a more definitive manner, or answer appropriately if needing clarification by the interviewer. On the other hand, there may be increased bias due to the participant choosing to answer based on social desirability and other social norms.
* Participants must take the time to listen to the interviewer and their responses may be impacted by an interviewer’s tone of voice, inflection and other speech patterns.
* As discussed in other sections of this manual, written questions can influence the participant based on the visual presentation of the survey.
* Primary/Recency Effects: Individuals tend to choose from the first categories offered (primacy effect) or the last categories offered (regency effect) depending on how the categories are communicated.
* With visual surveys, the participants will attend more to items appearing early in a list. So, if early response items are plausible to the participant and bring to mind confirmatory thoughts, they are more likely to be accepted by the participant (primacy effect) And, by the same token if early items seem implausible and bring to mind disconfirming thoughts, later items are more likely to be accepted (regency effect)
* With interviewer-administered surveys, there may not be enough time for the participant to process all of the response categories and the last categories heard may produce a more thought out response.
* Normative Question Order Effects: In interviewer-administered questionnaires, participants may adjust their answers to later questions based on how they answered earlier questions. In self-administered questionnaires, the participant can look ahead and consider questions found later in the survey before answering earlier ones or decide to change their answers later.
* Scalar questions-: The same scalar questions may produce more positive results when there is no visual display of the scale present.

**Types of Mixed-Mode Construction**

Mixed-Mode surveys are being increasingly used and making the decision to use a mixed-mode design can be based on number of considerations keeping in mind the cost, feasibility, and time frames needed to design, implement, and interpret the results.

* Unified Mode- Unified or uni-mode construction is defined as writing and presenting questions in the same or nearly the same way across different modes. The goal is for the meaning of the questions to remain the same so that items are measured equivalently across modes.
* Mode –specific construction- This is defined as modifying how questions are worded or presented for different modes based on the particular capabilities of each mode. Different question structures, wording, or presentations may be needed to provide the participants with a means to produce equivalent answers across survey modes.
* Mode-enhancement construction- This is defined as using features that are not available in all modes to improve the quality of responses to that mode. This may be used when the highest quality of answers is desired and the equivalency across modes is of a lesser importance. Examples of this type of construction could include: breaking questions into smaller parts to accommodate participants using hand-held devices, Interviewers using responses to earlier questions to formulate later questions, and web-based surveys using drop down menus or requiring answers to every question.

**7. Trend Data Basics**

Vocational Rehabilitation agencies do not do many longitudinal studies; however, VR agencies often do surveys to track trends in customer and employee satisfaction, needs assessment, etc.  Many of the caveats presented in *Internet, Mail, and Mixed-Mode Surveys*, Chapter 9, “Longitudinal and Internet Panel Surveys,” hold true for trend surveys.  Remember that when you measure a trend, you are in this for the “long haul.” Plan ahead when you create a survey that is going to be used over a period of years.  Do not become reliant on technology that is likely to become obsolete.

Changes in format, from the order of questions to the lay-out on a page, may impact responses.

Be cautious about mixing or switching modes from self-administered visual (paper or computer) to aural (phone or in person interviewing).  As mentioned in another section, responses tend to be mode-dependent.

Pick one mode of response. There is no evidence that offering a variety of modes improves response rates; however, there is evidence that responses differ according to the mode, making it difficult to combine data.

**8. Customer Satisfaction Surveys: Specifics and Delivery Methods**

The following guidelines (taken from Chapter 10 in the book, thus numbered as such) suggest specific ways to obtain true measures of satisfaction that can be accurately used to evaluate a customer’s experience.

**Sampling Methods**

1. *Consider randomly sampling portions of the population instead of the entire population, especially when the latter leads to individuals being surveyed repeatedly and unnecessarily.* For example, instead of surveying an entire organization every month, survey a tenth of the organization each month. This is essential to obtain high-quality responses. Over-surveying customers can create burn-out and impact how customers respond that will lead to non-response and measurement error.

**Non-Response Issues**

1. *Actively seek means of using follow-up reminders in order to reduce non-response.*  Follow up reminders should be worded carefully and in ways that explain why they are being sent. They indicate the seriousness of the survey, but must also “connect” with the kind of questionnaire being used. And keep in mind that a carefully constructed survey with questions that are meaningful to participants is also important in encouraging people to respond.
2. *Provide all selected participants with similar amounts and types of encouragement to respond.*Avoid having one customer receiving minimal encouragement to respond or information about how to respond (resulting from poor rapport with a counselor, for example) and another customer receiving a lot more encouragement and information (resulting from good rapport with a counselor). More than likely, these two customers would rate their experiences quite differently, but the person who had the poor experience will probably be less likely to respond.

**Measurement Issues**

1. *Avoid encouraging higher ratings during the delivery of the survey request.*Avoid asking or pressuring people to provide the highest rating possible. Biasing measurement in this way hinders discovering what customers really think and how businesses can improve their product or service. Activities intended to improve customer service need to take place prior to and entirely separately from the satisfaction survey. The survey must be designed and administered in ways to allow the business to fairly and accurately assess customers’ opinions.
2. Obtain responses from customers when they are best able to provide them. Some experiences need to be reported immediately in order to remembered, like eating in a restaurant or shopping in a store. Listening or viewing habits are often best recorded in a diary because these activities can be so frequent and mundane. On the other hand, training programs designed to have long-term impacts are often evaluated weeks or even months after occurring in order to measure lasting impacts instead of immediate impressions.
3. *Choose measurement devices that will have credibility with those who will use the results as well as with participants.*Avoid using a “delighted—terrible” scale. When designing questions and response options, make sure the users of the survey will take the results seriously and not interpret the measures as whimsical. Also, some users are uncomfortable interpreting polar-point-labeled scales. What exactly does a 3.7 mean on a scale of 1 to 5? It is also important that participants find scales comfortable to use and easy to interpret.
4. *Avoid choosing measurement devices primarily because of their potential for improving response rates.*Avoid designing questionnaires that are interesting and “fun to complete” at the expense of measurement. “Cuteness” can get in the way of interpretation and little research has been done to suggest that these types of scales actually improve response rates or to examine how they affect measurement.
5. *Be sure that scales are balanced and the measurement procedure fully revealed when reporting satisfaction survey results.*Participants tend to draw information not only from the words that describe categories but also from the number and positioning of categories. Unbalanced scales can artificially make the ratings more positive (or negative).

A scale should be designed that “fits in” with the culture of the group being evaluated—one that is comfortable for both sponsors and participants, and that minimizes measurement error.

Participants usually do not possess knowledge of satisfaction in the way they do age or other personal information. Since measurement of satisfaction is so susceptible to the effects of scale design, it is particularly important for surveyors to reveal exactly how it has been measured when reporting the results.

1. *Carefully evaluate the impact of using both aural and visual modes to measure satisfaction***.** Research has shown that responses are more positive by telephone than when paper or web-based questionnaires are used. Therefore, when conducting satisfaction surveys on a continuing basis, changing modes from one survey to another should be made with care so as to not impact the trends over time. If it’s necessary to change modes, responses should be collected by both modes for several surveys in order to evaluate the impact on responses.

Those who conduct customer satisfaction surveys are encouraged to disclose their methods when reporting the results. Due to the variety of sampling and implementation procedures and the diversity of measurement devices used, it is important for those who use and interpret results from these surveys to understand how the different sources of error can impact responses.

**Delivery Methods**

In addition to considering how these guidelines can improve customer satisfaction survey design, evaluators must identify how delivery methods can enhance or undermine the validity of survey results. As with survey design, selecting delivery methods appropriate to the type of feedback requested can reduce sampling, nonresponse, and measurement errors.

**In-Person Appeals with Diverse Follow-Up Procedures**

This delivery method, known as a “foot-in-the-door technique” has been successfully used to increase measurement validity by decreasing nonresponse. Best practice indicates implementation in two distinct stages: (1) initial contact with an in-person appeal and (2) follow-up contact with reminders and the survey itself. Successful implementation of this technique by the US National Parks Service resulted in increased response rates from 38% from 1985 through 1987 to 75% from 1988 through 2007. Evaluators interested in this technique may wish to carefully consider guidelines 10.1, 10.3, 10.4, and 10.6.

As an example, the procedure used by the US National Park Service (NPS) incorporates elements of best practice and capitalizes on face-to-face interactions to reduce nonresponse. Specifically, randomly selected individuals are asked to meet with a uniformed NPS official regarding a visitor survey and told that their participation would be appreciated. The uniformed NPS official asks only three questions at the initial meeting (i.e. the number of individuals in the party, the names of the individuals in the party, and the individuals’ ages) and collects contact information. If the party agrees to participate, they are mailed a more extensive 12-16 page survey as well as a follow-up postcard reminding the participants to complete the survey if they have not already done so. As many park visitors are vacationing, careful consideration is given to timing the survey and post card mailings so that they are received after guests have returned from their vacation.

The NPS example highlights several characteristics of best practice in implementing this technique:

* The initial in-person appeal collects limited basic information which is designed to highlight potential nonresponse issues (e.g. participant age) and collect contact information.
* The initial in-person appeal is brief, building rapport by respecting customers’ time and the purpose of their visit.
* The initial in-person appeal is conducted by a uniformed representative, adding legitimacy to the survey.
* The initial in-person appeal explains the survey’s importance, purpose, tools, and contact procedures prior to requesting participation.
* The follow-up procedure is timed to respect the unique characteristics of the organization’s customers (e.g. vacationing).
* The follow-up procedure includes a reminder (i.e. a postcard) which expresses gratitude and, due to its design (similar to a souvenir postcard), acts as an incentive.
* The follow-up procedure includes the survey itself, allowing participants to complete and return the survey at their convenience.

**Interactive Voice Response Methods**

Interactive Voice Response (IVR) is a phone survey method evolved from touchtone data entry. Based on a prerecorded script which includes instructions and prompts, IVR allows participants both touchtone numerical responses (e.g. “Touch 5 for highly satisfied”) and recorded spoken answers. While IVR may be cost effective, measurement validity can be compromised because of the complexity of scripting/programming, its often tedious user experience, and incompatibilities with current cell phone use and technology. Most importantly, IVR’s relianceon aural directions and verbal or physical user input may present accessibility challenges for individuals living with disabilities. As web-based survey technology continues to become more widespread and accessible, the use of IVR surveying may be declining. Interestingly, evaluators should note that automated IVR systems may be less socially desirable than traditional live phone interviews.

**Diaries That Capture Customer Behavior When It Happens**

Diary surveys require customers to self-report their behavior during a given timeframe. Timeframes may extend over days, weeks, months, or longer. In contrast to other forms of customer surveys, diaries are typically used to track customer use of a product (behavior) rather than their satisfaction with a product. Such surveys are ideal for evaluating *how*, *when*, or *how**often* a customer uses a product or service. The most common example of diary surveys is the broadcasting surveys conducted by Nielsen Media Research. For such surveys, participants log their media use (television, books, music, etc.) in their survey diary over a given period (typically one week). Because of the unique characteristics of diary surveys, considerations of contact, timing, and incentives must be addressed.

In contrast to best practice with other delivery methods, which stresses fewer contacts throughout the survey period, best practice in diary surveys stresses numerous contacts (i.e. 6 - 10) with the participant. Most of these contacts should be made immediately before, during, and immediately after the diary period. Typically, contact begins with one or two initial contacts which outline the purpose, tools, timelines, and reporting procedures. After consent is obtained, the diaries are mailed to participants shortly before the diary period begins. During the diary period several contacts are made which answer questions, serve as reminders, and express gratitude. Finally, additional contacts are made after the diary period is completed. It is critical to express gratitude and offer incentives due to the labor-intensive nature of diary surveys.

**Examples of Poorly Constructed Scales in Customer Feedback Surveys**

*1. Scale with an unspecified meaning*:

Using this 1 to 5 scale, rate how well this product met your need 5 4 3 2 1

2. *Scale that is indirect and hard to understan*d (requires participants to think along 2 dimensions—agreement and satisfaction):

To what extent do you agree or disagree that you are satisfied with the service you received?

☐Strongly agree

☐Somewhat agree

☐Neither agree nor disagree

☐Somewhat disagree

☐Strongly disagree

*3. Scale that combines different concepts that may be confusing:*

How would you rate the handling of your baggage?

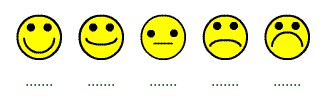
☐Excellent

☐Satisfactory

☐Good ☐Unsatisfactory ☐Poor

*4. Scale that may please some participants, but makes it difficult to interpret results:*

Which of these faces best describes the way you were treated during your last visit?



*A B C D E*

*5. An unbalanced scale:*

How was the quality of the food?

☐Excellent

☐Very Good

☐Good

☐Fair

☐Poor

**Procedural Timeline for Diary Surveys**

* Initial contact explaining the purpose, procedures, tools, and timelines
* Contact in advance of diary mailing (possibly 2 - 4 weeks)
* Mailing containing diary, review of procedures and timelines, and gratitude/incentives
* Telephone, email, and/or text message reminder at the beginning of the diary period
* Telephone, email, and/or text message reminders throughout the diary period which express gratitude and offer contact information for help/assistance
* Telephone, email, and/or text message reminder at the end of the diary period which expresses gratitude and reviews procedures for returning the completed diary
* Contact to express gratitude, offer incentives, and/or confirm receipt of completed diary at the conclusion

**Group Administration**

Group administration surveys vary greatly due to considerations of group structure, purpose, timeliness, and fit. Group administration surveys are ideal when timeliness is a primary consideration. That is to say, when customers receive a service and it is critical to evaluate while the memory is still fresh in the customers’ minds, group administration surveys are a valuable tool. When anonymity is desired (e.g. when evaluating a presenter, instructor, or service provider), paper surveys are commonly used. If, by contrast, group participation or discussion is desired (e.g. when evaluating impressions and feedback on proposed services), guided group interviews moderated by a skilled facilitator are often effective. In these group interview surveys, mixed modes (e.g. paper forms for participants, facilitator’s notes, and audio/video recordings) may be used simultaneously to gather a more holistic set of responses. As with all delivery methods, successful utilization of group administered surveys must prioritize careful consideration of the aforementioned guidelines to ensure the validity of survey data.

**9. Closing Comments**

Before having a look at the Appendix on the following pages, we want to offer a few collective comments to the user of this Guide. There is a nationwide need to stay current with survey design dynamics. We recognize many positive aspects from states that have shared their survey examples. This trend of transparency and willingness to share indiactes that we are truly operating as a community of practice. SuRGE-5 members wish you well in your survey design endeavors.

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**Appendices**

A. User Guide Interactive Element

**Under construction!** Draft to consider (we recently added the last section; Michael to work up an ending to Appendix A):

* + - Darlene to provide voice-over Introduction
    - Guidelines on questioning (section 5)
      * Jan and Michael
    - Guidelines on wording (section 5)
      * Elaine, Karen, and Michael
    - *Before/after scenario* (ask the question this way or this way….based on guidelines from the User’s Guide) via Camtasia narration.
      * Matt
    - Guidelines on how and when to use mixed-mode, with cautions around reliability and validity (section 6)
      * Michael
    - Tips, Pitfalls, and Benefits (section 2)
      * Andrew and Michael

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Easy ways to access the User’s Guide:

* Visit [www.vocational-rehab.com](http://www.vocational-rehab.com) and click on the Resources tab
* Email Dr. Darlene Groomes at: [groomes@oakland.edu](mailto:groomes@oakland.edu)

