ADVICE FOR SURVEY PROPONENTS

Document aimed at supporting survey proponents at the University of Otago. To be read in conjunction with the Surveys of Students and Graduates Policy and the Surveys of Students and Graduates Guidelines

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UNIVERSITY of OTAGO
Te Whare Wānanga o Otāgo
NEW ZEALAND

Contents

Introduction

This document has been developed as an internal guide for staff who are considering conducting a survey of University of Otago students or graduates. It contains tips and pointers about survey definition, design, management and data collection. It is not designed as an academic handbook on how to manage surveys even if it draws some of its content from the academic literature available on the topic. Rather its aim is to act as a lay person's guide to managing surveys in the particular context of the University of Otago.

For specific information concerning the approval of a survey project covered by the scope of the Students and Graduates Survey Policy, please consult the companion document *Guidelines for Survey Proponents*.

Comments or feedback on this document are welcome and should be directed to surveys.coordination@otago.ac.nz.

Defining the Project

As with any research project spending sufficient time and attention on this part of the process is the secret to success.

Is a survey the right tool for this project?

This question is occasionally overlooked by survey proponents and yet it is essential to answer it before getting into the specifics of how to run a successful survey. To answer this question it is important to conceptualise the planned task as a 'research project'. The first step, therefore, is to clearly articulate a research question. For instance the research question could be: How satisfied are College Residents with their residential experience? Once the research question has been defined, proponents should be in a position to ascertain the project's needs, including the most appropriate data collection method(s) to be used.

Surveys are only one of many possible research methods available to investigators aiming at conducting social research. It is beyond the scope of this document to investigate all the possible methods that may be employed. However, the list below could be a starting point for a reflection about the most appropriate research method(s) for the topic being investigated:

- Experimental studies
- Field surveys
- Secondary data analysis
- Case research
- Focus group research
- Action research
- Ethnography

Researchers often select the research designs that they are most familiar with and feel most competent to handle, but ideally, the choices should depend on the nature of the topic being studied.

Selecting a Research Method
Social Science Research: Principles, Methods, and Practices/ Anol Battacherjee
http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=1002&context=oa_textbooks

Once reflection on the most appropriate research method(s) is completed, a method other than a survey may be identified as the most suitable research tool for the project or it may be seen as only one source amongst many other sources.

The rest of this document assumes that a survey has been clearly identified as an appropriate data collection method for a particular project.

Pre-existing data

Before embarking on a new institutional survey, researchers should be mindful of the fact that the data sought may already exist. As a large organisation, the University of Otago collects and stores data about its activities, students, staff and alumni. For many reasons such as commercial sensitivity and privacy, this information is not always readily available to the researchers but it is useful to find out if relevant information is already held somewhere within the University. Many institutional

surveys are already conducted every year and while most of these surveys have been designed with a particular purpose in mind, the information they collect can often be useful in another context or area of the University. Some of these surveys regular are listed online on the Surveys Schedule and researchers are advised to consult the schedule to see if they could use some of the information that has already been collected by others.

The remainder of this document assumes that no or insufficient relevant pre-existing is available to proponents.

Drafting a Survey Project Brief

Drafting a brief is not a requirement when planning a project but it will help investigators to implement their project and it will be a useful guide for any external individual called upon to assist with the project (survey designer, data analyst, marketer…). Having a written brief will also be useful when it comes to reporting on the methodology and results of the project and also if the project may be replicated in the future.

A good brief (usually a written document) will contain (at least) the following information:

- The reason for the research project (the research question)
- Background to the project
- A set of objectives that indicate what the project seeks to find out and what decisions will be shaped by the findings
- Data collection methods
- The target audience of the research results
- Timeframe for deliverables, including the format of the outputs, reports, graphs, presentation and so on.
- A list of requirements (e.g. resources, staff, IT needs)
- A budget.

Within the context of the University of Otago it is important to identify how a particular project fits with the strategic imperatives of the organisation as outlined in the University of Otago Strategic Direction document (http://www.otago.ac.nz/about/official_documents.html).

The best project briefs are designed with the input of the end-users of the information. This is especially important when the survey design or management is outsourced.

Inspiration for a good brief can be drawn from documents such as the 2014 Otago University Research Grants Guidelines (UORG) additional information can be found at www.otago.ac.nz/research/forms/UORG_University_of_Otago_Research_Grants

Once drafted the content of the brief should enable survey proponents to populate the Survey Proposal Form quickly.

Ethics Approval

Using a survey methodology can raise ethical and legal issues that need to be seriously considered before embarking on a survey project.

Depending on the intended use of the data, obtaining approval from the University of Otago Ethics Committee may be required. As a general guideline, information collected for the sole purpose of internal business improvement is not normally subjected to the Ethics Approval processes. In any case, the Surveys Coordination Group strongly encourages Survey proponents to become familiar with the University's ethical approval guidelines.

It is important to note though that approval of a survey project by the Surveys Coordination Group does not constitute an Ethics approval as the two processes are separate.

Ethics Contact:

Gary K. Witte, Manager, Academic Committees

Academic Services

(479) 8526

mailto:gary.witte@otago.ac.nz

Human Ethics Committee webpage

http://www.otago.ac.nz/administration/committees/otago000864.html

An excellent source of information for anyone wanting in-depth information on the premises of ethical and legal considerations in the context of New Zealand research is **The Law of Research: a guide** edited by John Dawson and Nicola Peart.

The law of research: a guide /edited by John Dawson and Nicola Peart. (2003) Dawson, J., Peart, N. University of Otago Press

http://otago.hosted.exlibrisgroup.com/primo_library/libweb/action/display.do?tabs=detailsTab&ct=display&fn=search&doc=OTAGO_ALMA21138799800001891&displayMode=full&vid=DUNEDIN&group=GUEST&onCampus=true&lang=eng

Survey Design

The physical creation of a professional looking survey instrument (questionnaire) has been greatly enhanced by the advent of mechanisms for producing online surveys. However, while it is now relatively simple and quick to create a visually attractive questionnaire, it does not guarantee that the questions will be well designed i.e. that the survey will collect the information needed to answer the research question. Survey proponents are strongly encouraged to allow sufficient time for the design phase of the research process as it can be a lengthy and complex process. For survey proponents lacking practical experience in designing surveys it is advisable to consult a survey design handbook and have the questionnaires reviewed by a suitably qualified person. Poorly designed questionnaires are a source of respondent frustration and may impact on the willingness of potential participants to take part in subsequent surveys.

Questionnaire Design

Clarity of objectives

It is essential always to keep the research objectives of the survey in mind. A questionnaire can be well designed with good quality questions and yet be off the mark in terms of yielding the data needed to fulfil the aim of the research.

To assist with this process it is good practice to draft a mock-up version of any table, graph, and report that you expect to include in the report on survey findings. This will ensure that the questions are directly aligned with expected deliverables for the project.

Existing versus Ad Hoc Questionnaires

Fundamentally, the quality of information collected through a particular survey will be determined by the quality of the questionnaire design. As a general rule it is preferable to attempt to use or adapt a pre-existing (and well researched) instrument than to create an ad-hoc questionnaire. Questionnaires are complex to create and a thorough testing of an instrument will usually take a long time to complete. By using a pre-existing questionnaire survey proponents will be more efficient and will be able to have more confidence in the validity of their results.

Another aspect to consider is that even if a particular instrument has not been well researched at the time of its creation but has been running for a period of time, care must be taken before replacing or modifying the instrument. Modifying an existing instrument will affect the ability to use the data longitudinally and the reporting procedures at the end of the survey process.
In cases where there is no existing instrument that will yield the desired data necessary to fulfil the aims of the project, it will be appropriate to create an entirely new questionnaire.

Creating a New Questionnaire

Below are some general considerations to keep in mind when attempting to create new questions/questionnaires.

Common stages in creating a new questionnaire:

Stage	Description
1. Research question formulation	Define what you want to know and how the questionnaire will answer your requirements.
2. Visualise reporting	Consider how you will present the results and mock-up a reporting format.
3. Question design	Draft questions to meet reporting requirements.
4. Structure survey flow	Arrange questions into themes. Sequence questions to aid respondents understanding. Create an effective page layout.
5. Test questions	Obtain meaningful feedback as realistically as possible and implement findings. Obtain feedback from a variety of people on the questions and whether they answer the research question (should involve end users here). Pilot the questions with a small sample from the intended survey respondents to check their understanding of what the questions are asking. This can be done in various ways (not just by survey) but also by focus groups or interviews.

Common types of closed questions

Multiple Choice (Only One Answer Allowed)	Allows only one answer to be selected
Multiple Choice (Multiple Answers Allowed)	Allows more than one answer to be selected
Rating Scale	Allows respondents to rate an item
Ranking	Allows respondents to drag and drop choices to rank
Matrix of Choices (Only One Answer Per Row)	Similar to a Rating Scale; however, it does not calculate a rating average
Matrix of Choices (Multiple Answers Per Row):	Allows multiple answers per row
Matrix of Drop-down menus	Presents multiple drop-down menus within the Matrix
Slider/Sliding Scale	Allows respondents to drag sliders, bars, or stars to express numeric amounts

Common types of open-ended questions

Single Textbox	Enter responses into one textbox
Multiple Textboxes	Creates multiple textboxes. Each box can be labelled individually, to collect specific information
Comment/Essay Box	Creates one large comment box
Numerical Textboxes	Only allows numerical values as answers
Demographic	Collects information such as name, company name, address, email, etc
Date and/or Time	Allows answers to be entered in a date and/or time format

Close versus Open ended questions

Response Format	Advantages	Disadvantages
Closed questions:	•Quick & easy for respondents •Less articulate are not at a disadvantage •Response choices can clarify alternatives •Fewer irrelevant answers •Easier to code, analyse and report on	•Frustrates respondents if categories are not exhaustive •Misinterpretation of questions may go unnoticed •Complex issues are forced into simple categories •Categories are pre-determined by researcher so may miss relevant issues
Open-ended questions	• Permits detail, clarification • Allows unanticipated answers • Reveals the logic behind a respondent's response	• Generalisation or comparison difficult when reporting • Coding and statistical analysis can be difficult and time-consuming (but possible) • Irrelevant answers possible • Bias towards more articulate respondents

Open ended questions are often harder to analyse than closed questions because of their qualitative nature. Nevertheless, qualitative data can be reported in a quantitative form by coding comments. The coding can follow various systems including simple word counts, count of topics/themes mentioned or positive vs. negative comments counts. Statistical Analysis Software such as SPSS Analytics or specialised qualitative data analysis software such as NVivo can greatly assist for complex projects.

Open-ended comments are to be treated with caution because they can occasionally contain objectionable content or identify individuals in an inappropriate manner. It is therefore advisable to review all comments that are to be released publicly and censor them if necesary.

The Quality Advancement Unit applies the following **guidelines when reporting open-ended comments to departments**:

Comments are provided word-for-word to Departments, except where such comments identify an individual student (positively or negatively) or a member of staff (negatively), or are deemed offensive. (Student Opinion Survey and Graduate Opinion Survey Guidelines)

Other question types:

- Heat maps: allows inserting a picture that respondents can then click to indicate the area that stands out to them or those they like the most.
- Hot spot: insert a picture that respondents can then click to indicate whether they like or dislike predefined regions/areas.
- Captcha: helps verify if the survey takers are humans and not computers
- Meta Info: collects information on how respondents are accessing your survey
- Timing: records how long a respondent has spent on the page
- File upload: allows respondents to upload a document.

Most online survey providers have useful descriptions of the different type of questions they offer. The type of questions offered varies between providers.

Common problems in wording questions

Problem	Example question	Explanation
Leading question	Why do you think that the University of Otago is better than other universities in New Zealand?	Leads respondents to make positive statements about the University of Otago.
Ambiguous	Do you often use the Unipol gym? 1.Yes 2. No	How do respondents interpret 'often' in this case?
Unanswerable question	What was the name of your first university teacher?	This is ambiguous and many respondents will be unable to answer accurately.
Double-barrelled question	Was the service delivered in a helpful and timely manner? 1.Yes 2. No	How do you answer if the service was delivered late but in a helpful manner?

Non exhaustive response list	Which ethnicity do you identify with? 1. Pakeha 2. Maori	What if you identify with a different ethnicity (e.g. Asian)?
Non-exclusive answers	How many participants will your survey target? 1-99 99-100 101+	What do you answer if your survey targets 99 participants?

Most of the issues identified in the table above can be avoided by careful consideration of the wording during the design phase. Pilot-testing of the instrument with a small sample of the target population can also be a useful source of feedback on the wording.

Number of questions/length of questionnaire:

Survey proponents should strive for brevity to ensure that respondents do not drop out or start answering questions randomly, and to limit the overall respondent burden. Resist the temptation to include "interesting" questions that will yield data without any clear purpose. It is important to let respondents know approximately how long it will take to answer the survey. There is no "standard length" for a survey. An appropriate length will be determined by many factors but should be adapted to the audience being targeted. In most cases, it will be unreasonable to expect someone to spend 30 minutes answering a survey in a field intercept situation (when customers/participants are interviewed in the field e.g. street, mall, …) but it may be possible via a paper based or internet survey if the respondents feel concerned by the topic and find the incentives attractive. Pilot testing the survey should give survey proponents an indication of the acceptability of the questionnaire length. Some survey proponents use progress bars for their online surveys. They work well for linear surveys but can be very misleading when surveys contain a lot of branching logic (when respondents can follow different pathways to completion) and in these cases they should be avoided.

Survey Design Handbooks

Handbook of survey methodology for the social sciences / Lior Gideon, editor.

http://otago.hosted.exlibrisgroup.com/primo_library/libweb/action/display.do?tabs=detailsTab&ct=display&fn=search&doc=OTAGO_ALMA21103157160001891&displayMode=full&vid=DUNEDIN&group=GUEST&onCampus=true&lang=eng

The SAGE handbook of online research methods / edited by Nigel G. Fielding, Raymond M. Lee and Grant Blank
http://otago.hosted.exlibrisgroup.com/primo_library/libweb/action/display.do?tabs=detailsTab&ct=display&fn=search&doc=OTAGO_ALMA21137560670001891&displayMode=full&vid=DUNEDIN&group=GUEST&onCampus=true&lang=eng

Introduction to questionnaire design and analysis [electronic resource] / Dan Diaper.
http://otago.hosted.exlibrisgroup.com/primo_library/libweb/action/display.do?tabs=detailsTab&ct=display&fn=search&doc=OTAGO_ALMA21909240800001891&displayMode=full&vid=DUNEDIN&group=GUEST&onCampus=true&lang=eng

Target Population

It is often not practical for a researcher to target/contact the entire population of interest when conducting a research project, especially in social sciences. For this reason it is very common to use the findings from a research project targeting a sub-set of the population of interest to draw inferences about the overall population. The following section outlines the definition and issues related to sampling.

Definitions: Census, Survey, Population and Sample

Survey: a survey is an investigation about the characteristics of a given population by means of collecting data from a sample of that population and estimating their characteristics through the systematic use of statistical methodology. The term survey covers any activity that collects or acquires statistical data. Included are censuses, sample surveys, the collection of data from administrative records and derived statistical activities (Statistics Canada, "Statistics Canada Quality Guidelines", 3rd edition, October 1998, page 7).

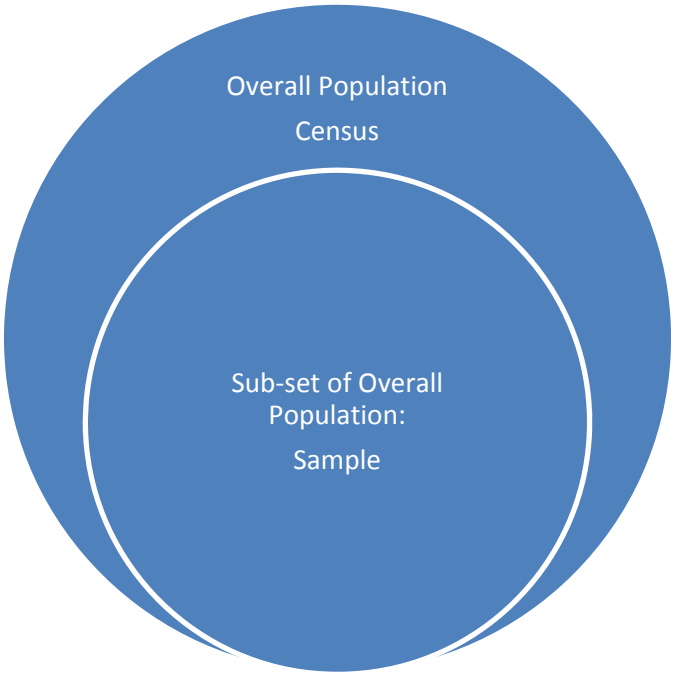
Census: a census is a particular research methodology which collects information from all members of a given population without exception. If all members of the population answer, the data collected is truly representative of the overall population.

Population: is the overall, complete target for the project, the group of individuals about which conclusions will be drawn following the survey.

Clearly defining the population of interest for a particular project is vital for a successful research project. This task can be complex. If, for example, a project aims to find out about the destinations of graduates from a particular department, what is meant by the term 'graduates' will need to be clearly defined.

Indeed, the term 'graduates' is sufficiently generic that several questions will need to be answered to define the target population before the project can start. Are all graduates since the creation of the department to be included? Or only graduates from the last ten years? Is the project aimed at graduates with majors in the particular subject or should students who completed the requirements for a certain number of papers but did not major in the subject also be included?

Sample/Sampling: a sample is generally a sub-set of the population. If the sample is the same as the population, the survey is then said to follow a census methodology (similarly to Statistics New Zealand well known census which targets all New Zealand Citizens and Residents). Sampling refers to the selection of the relevant sub-set of population.



Choice of Sampling Technique

The sampling process involves selecting a sub-set of the potential survey respondents from the overall target population.

Sampling is a convenient approach to surveying because it usually minimises the cost and time involved in the data collection. It also reduces overall 'respondent burden', an important consideration when the same population is being targeted repeatedly as will often be the case at the University of Otago. Statistical inferences about the overall population are then made based on the responses collected via the sample.

A crucial consideration for researchers is how representative the sample is of the overall population studied. This question should be addressed during the sample selection and then reviewed after data collection. The representativeness of the sample can be affected by many factors. A major concern of surveys is the potential bias introduced by non-response; the concern being that respondents and non-respondents may be characteristically different , therefore provide different types of responses and that this will lead to biased inferences being made about the overall population. Surveys proponents usually attempt to mitigate this potential bias by improving survey design, sending reminders and offering incentives in order to maximise response rates.

An important consequence of using a sampling methodology is that it introduces uncertainty about the representativeness of the data collected, and limits the confidence researchers can have about generalising the findings with reference to the overall population. This consequence needs to be kept in mind by survey proponents when they reach the analysis phase of the project as the results will have to be presented in a way that acknowledges these limitations.

Several different methods of sampling are commonly used by survey researchers (20 are currently listed on Wikipedia!). The choice of the sampling method will be dictated by the aims of the research and its parameters.

Response rates, definition and importance

Response rate (also known as completion rate or return rate) in survey research refers to the proportion of people who answered the questionnaire divided by the number of people included in the sample. It is usually expressed in the form of a percentage.

Response rates tend to draw the attention of researchers because of the often made assumption that a low response rate will lead to low survey accuracy. Conversely, it is usually assumed that the higher the response rate, the more representative the results are. However, response rates are only one factor impacting on the level of accuracy of survey results while there are some potentially more important factors such as the lack of sampling bias and sampling error. Researchers are encouraged to become familiar with the literature available on response rates, sampling bias and sampling errors (see text box below).

A general guide is that regardless of the actual merits of high response rates it is advisable for researchers to strive for a response rate as high as possible to ensure that a lay audience will have confidence in their findings.

Sampling Handbooks

Survey sampling: theory and methods / Arijit Chaudhuri, Horst Stenger.
http://otago.hosted.exlibrisgroup.com/primo_library/libweb/action/display.do?tabs=detailsTab&ct=display&fn=search&doc=OTAGO_ALMA21132262980001891&displayMode=full&vid=DUNEDIN&group=GUEST&onCampus=true&lang=eng
Sampling methods exercises and solutions / Pascal Ardilly, Yves Tillé
http://otago.hosted.exlibrisgroup.com/primo_library/libweb/action/display.do?tabs=detailsTab&ct=display&fn=search&doc=OTAGO_ALMA21101203170001891&displayMode=full&vid=DUNEDIN&group=GUEST&onCampus=true&lang=eng

Response Rates

"Response Rates – An Overview." American Association for Public Opinion Research (AAPOR). 29 Sept 2008. http://www.aapor.org/responseratesanoverview

SurveyMonkey Response Rates and Surveying
http://s3.amazonaws.com/SurveyMonkeyFiles/Response_Rates.pdf Incentives

Offering an incentive to a respondent seeks to trigger a reflex known as "the norm of reciprocity" amongst the target population. In other words, the aim of offering an incentive is to trigger the social norm that requires someone to do something in return for a reward or a goodwill gesture, in this case answering a survey.

Incentives have the potential to improve response rates but have to be carefully managed because they can also skew responses. The key is to choose an incentive that is likely to be equally appealing to all potential respondents. Depending on the audience and the nature of the survey, the survey results may be just as enticing (if not more) than a tangible prize.

Concerns about the effects of incentives on data quality (respondents answering "mindlessly" only to get a prize) have been disproved by countless studies. So an incentive is a practical, credible

option to increase response rate percentages for surveys without sacrificing the validity of results. Research into the effectiveness of different types of incentives is on-going. Some findings in this field of research are interesting and worth bearing in mind when considering this matter. For example, research shows that instantaneous small prizes are the most effective way to improve a response rate. The closer a prize is to actual cash the more effective it will be (grocery or petrol vouchers are common substitutes for cash). The incentive chosen should take account of the target audience. Book vouchers seem to be less popular with younger audiences than iTunes vouchers. According to information presented at the Society for Industrial & Organizational Psychology's 17th Annual Conference, even finding a $1 bill in a paper survey has been shown to surprise the participant, generating more interest in the survey and higher response rate percentages.

The problem with universal small cash-like incentives is that they are costly if the survey is targeting a large population. Additionally, there are some indications that the "norm of reciprocity" reflex is less commonly found among respondents from generation Y and younger than in older generations. In fact, when the cost-effectiveness of different type of incentives is taken into account it appears that a large lottery incentive can be the most cost-efficient way to improve your response rate.

In the end, the decision to use incentives or not and the type of incentive to be used has to be guided by the project parameters in terms of response rate expectations, budget and data integrity.

Within the particular context of the University it is also important to take into account what is considered to be a normal/acceptable incentive. This will vary depending on the length of the survey and the target population.

Modes of delivery

Surveys can be delivered in many ways and the different modes are not mutually exclusive of each other. Online surveys have recently grown in popularity because of their perceived simplicity and the increased access to and use of the internet by the general population. In the University environment this trend is even more pronounced because access to, and the use made of the internet is widespread across the student and staff population. However, it may be that some surveys will call for a different mode of delivery because of the targeted population, the required response rate or another project parameter.

Common modes of data collection

- Online
- Paper
- Phone
- Face to face
- Other

Online versus Paper Surveys

Mode of Delivery	Advantages	Disadvantages
Online Survey	•lower costs •faster data collection •faster analysis •good with 'technologically	• Lower response rates (questionable) •Need technical skills •Can create sample bias (access

	savy' audiences	to internet) •Technical difficulties can put off respondents
Paper Survey	• Higher response rates • Good with 'technologically challenged' audiences	• Higher cost (increasing as postage is going up) • Not seen as environmentally friendly (wasted paper) • More time consuming to administer and process the data

The distinction often made between paper surveys versus online surveys is in most cases artificial or at least potentially misleading because it really only usually refers to the use of an online questionnaire versus a paper-based questionnaire. However, in both cases the mode of recruitment of participants can involve the use of online or paper based material. It is, for example, common practice to send hard-copy invitations to online survey participants to legitimise the online invitation that will follow. Conversely, one can imagine a situation where online invitations would be sent to participants to fill in a paper based questionnaire after participating in a laboratory experiment.

Online Survey Tools

There are many online survey tools available. Some tools require a license agreement involving a cost but other tools are free to use. The more expensive tools usually offer sophisticated functions e.g. more immediate reporting or more efficient follow-up features. Anecdotal evidence at the time of writing indicates that Qualtrics and Survey Monkey are the tools most commonly used at the University of Otago. The University of Otago has entered into a university wide license agreement with Qualtrics in October 2014, all staff and students are able to use Qualtrics as a result.

Survey Software

Online Providers

www.qualtrics.com/

www.surveymonkey.com/

Cost

The cost of individual projects will vary greatly depending on several factors.

Some factors to consider when attempting to evaluate the cost of a project are provided below:

- Number of participants (particularly for a paper based survey, this can also be a factor for an online survey depending on the license agreement with the survey provider)
- Cost of survey software license
- Incentives
- Staff time
- Consulting
- Sample/Panel Purchase (not usually applicable)
- Cost of respondents time

- Degree of complexity of analysis (external or in house)
- Postage/Texting
- Data entry
- Printing

Security and Storage of Data

Security of data needs to be considered as part of any survey project. In the case of online surveys it will be important to evaluate if the information collected is potentially sensitive, as full security cannot be guaranteed unless the data is hosted on site (this service is currently only offered through Select Survey). For example, it is very important to ensure that any patient data is held on campus to satisfy the requirements of some Research Grant organisations.

Another factor to consider is who will have access to the data both during and after the data collection period. For some projects it may be sensible to establish different levels of authorisation. For example, some staff could have access to de-identified data, while a restricted number of staff would have access to the full data set.

Finally, it is advisable to consider how the data will be stored and for how long. If the data is collected via a commercial online provider, it is important to export the data as soon as the project is completed to ensure that an on-site copy is available. It may also be advisable to delete all externally held data once the project is completed to avoid any risk of unwanted dissemination. Backup copies of the raw data and analyses should be made throughout the project. All data should be stored on a password protected computer in a secure office. If ethics approval is needed for the project then you will need to specify the security and storage measures in your application.

Data Collection

Contacting Participants

Survey proponents should be cautious about using a list of participants that has been generated for another purpose, as it may not be appropriate and the list may not be up to date. How the list will be filed after use should also be considered.

Several areas of the University have access to various types of information about students and graduates. Development and Alumni Relations can provide guidance in relation to contact details for graduates. Similarly the Project Office can provide guidance about contact details for students.

Probably the single most important method of improving response rates for finite population surveys (when the identity of potential respondents is known) is to have good quality and up-to-date contact details.

Relevant Official Documents and Other Sources
Email Policy
http://www.otago.ac.nz/administration/policies/otago003150.html

University Email Address Management Guidelines (Pending Approval)

Development and Alumni Relations
http://alumni.otago.ac.nz/AboutUs
Project Office
http://www.otago.ac.nz/projectoffice/

Drafting an Invitation Letter and Reminders

Drafting the initial invitation is a crucial part of any survey project. While survey proponents may have been working for months on the survey it is important to remember that the initial invitation email or letter is the first exposure that potential respondents will have to the project and they will decide whether to proceed based on how persuasive and relevant the invitation is to them.

Depending on the nature of the project a standard invitation letter should include the following information:

- An appropriate salutation (using the name of the respondent if appropriate/possible). Personalised invitations have been shown to improve response rates.
- A brief description of the purpose of the project, why it is important (including why it is important to respondents), and how the information will be used.
- A description of the incentives and of how and when they will be awarded (if relevant).
- The expected time it will take to answer the questionnaire (based on pilot-testing or past experience).
- The closing date for the survey (Be precise and give a date and a time).
- How to access the survey whether it be by a personalised or generic link. It is important to include a plain text version of the link if you are using an HTML hyperlink as these will not always display properly.
- An opt-out link (optional, but strongly recommended at least after the initial invitation).
- Contact details of a survey coordinator for questions, technical issues, etc.

If the invitation send-out is managed internally, it is important to send the invitation in plain text format for respondents who may disable HTML. Reputable survey providers will have the technology to send emails in both plain text and HTML versions allowing you to be more creative with your layout.

Consider if the survey is voluntary or compulsory (e.g. Statistics New Zealand's Census). This will give an indication of the appropriate level of "pressure" that can be used to convince participants to take part. However, it is important to keep in mind that forcing respondents to participate or applying unjustified pressure may have an impact on the quality of the data collected.

As a general rule one reminder during the data collection period is considered to be sufficient for most projects. The number of reminders to be sent should be planned. This number will depend on the length of time the survey is open and the nature of your respondents and the project. Reminders are important to improve your response rate. However, do not send too many, as you may put your respondents off. It is vital to ensure that only non-respondents are targeted when sending reminders. Reminders should follow the same format as the initial invitation letter but be briefer especially regarding the aim of the project.

Timing of Survey

The timing of the invitation letter/opening of survey send out is another key aspect of the project. It is important to have someone on hand in front of the computer (in the case of an online survey) when sending the initial invitation. This is to ensure a prompt reply is made to any emails received from respondents alerting you to a problem with the despatch. Factors such as holidays, examinations and time of the day should also be taken into consideration. Many factors can affect response rates and they will depend heavily on the make-up of the target population so there are no hard rules about the best time to send a survey. Nonetheless, the Quality Advancement Unit's experience with student surveys indicates that Mondays and Fridays are to be avoided when launching a survey targeting this population.

In any case, it is essential to check if the survey tool is ready to receive responses when the initial invitations are sent and that it will remain open for the entire data collection period. If the data collection period is extended, the closing date for the survey in the online survey application will need to be extended too.

Academic Dates
http://www.otago.ac.nz/news/events/index.html?category=Academic%20Dates
Public Holidays
http://www.dol.govt.nz/er/holidaysandleave/publicholidays/publicholidaydates/
Leave & Holidays (University)
http://www.otago.ac.nz/humanresources/hr/employment/leave.php

Managing Data Collection

All online survey projects should have someone acting as the designated contact person for the survey when it goes live. The contact person should be checking answers and access to the survey constantly for the first hour or so in case there is any trouble with access or the survey flow. The contact person should be sufficiently skilled to troubleshoot quickly any issues respondents may have.

Occasionally, different browsers will react in unexpected ways when accessing an online survey (this should be minimised with a reputable online survey provider). The survey should be tested using different browsers if this is a concern.

Some staff time should be allocated to dealing with issues such as emails reaching redundant email addresses and general queries about the survey. Occasionally invitations will be recognised by the email address provider as spam and filtered away from the respondent's inbox.

Survey Proponents may wish to consult the freely available "How to Avoid Spam Filters" guide provided by MailChimp©. It is very important to remember that if university emails are classified as spam by email address providers all survey proponents will be affected.

http://mailchimp.com/resources/guides/how-to-avoid-spam-filters/

As mentioned earlier, for both paper based and online surveys it is common to send reminders to potential participants during the data collection period. Most online survey software tools allow their users to include an opt-out link that potential participants can use to indicate that they are not interested in participating in a study.

Post Data Collection

Survey Data Analysis

Most survey software have automated reporting capabilities, usually reporting mainly descriptive statistics, but some tools are quite sophisticated and allow survey proponents to create elaborate reports within the software.

Most survey proponents still export the data (or input it if it is a paper based survey) into a statistical analysis package or Excel if the project outputs are simpler. Exporting the data should be done in any case as a back-up.

The kind of statistical analysis that is or should be conducted is entirely dependent on the nature of the data collected and the research question. It is useful for the person in charge of analysing the data to have at least some basic knowledge of statistics.

In all cases, even when only descriptive statistics are reported, it is essential to provide some background information such as the size of the population targeted and the number of responses received.

As mentioned earlier, any survey following a sampling methodology (not a census) will raise questions about the representativeness of the data. Some statistical indicators can provide an indication of how confident researchers should be in their findings (e.g. confidence interval).

In all cases, it is important to clearly outline the limitations of the research findings. Usually survey results are only one piece of evidence to consider alongside other pieces of evidence. Triangulation (cross-validation) of research methods is always advisable especially if the findings are going to be used to guide decision-making.

Statistical Analysis Packages
R
http://www.r-project.org/
SPSS

http://www-01.ibm.com/software/analytics/spss/
STATA
http://www.stata.com/

Communicating the Findings

It is good practice to provide feedback on the findings and actions taken as a result of a survey to the respondents, a process sometimes called "closing the feedback loop". Respondents have given up their free time to participate in a survey and this "good will" gesture should create an obligation of reciprocity for survey proponents to spend some time reflecting on how participants can be informed of the survey results and outcomes. This step is important for any project both as a courtesy to the survey respondents and to help preserve the future willingness of potential participants to provide answers to subsequent surveys conducted by you or other University survey proponents. In other words, it is the courteous thing to do for your respondents and for other survey proponents.

To give a sense of the level of engagement of participants it can be useful to report (if known) the combined time spent by respondents answering the survey. It will give a clear sense of the amount of good will and support provided by participants and of how critical it is to ensure that the information collected is used for effective change.

Some survey proponents include a specific question in their survey asking respondents if they wish to be kept informed of the outcome of the survey. This is an effective way to identify those participants that wish to be kept "in the feedback loop" and avoid bothering those who are not interested. In some cases providing a copy of the findings of a survey to respondents may be used as a low cost incentive.