Online Research
A Handbook for Online Data Collection

- *Your Guide to Effective Customer Management*

.... **Vivek Bhaskaran**
CEO and Co-Founder, Survey Analytics

Table of Contents:

Online Research and Data-Collection – Why?

Feedback is a vital part of any organizations growth. Weather you conduct regular focus groups to elicit information from key players or, your account manager calls up all your marquee accounts to find out how things are going – essentially they are all processes to find out from your customers' eyes – How are we doing? What can we do better?

Online surveys are just another medium to collect feedback from your customers, employees and anyone your business interacts with. With the advent of Do-It-Yourself tools for online surveys, data collection on the internet has become really easy, cheap and effective.

Sending Out A Survey to Customers Can Double Sales

We all are well aware of a simple fact in marketing - Acquiring a new customer is 10 times more difficult and expensive than retaining an existing one. This is one of the fundamental driving forces behind the wide-spread adoption and interest in CRM and related customer retention strategies.

In a research study by Rice University Professor Dr. Paul Dholakia and Dr. Vicki Morwitz, published in Harvard Business Review, the experiment concluded that the simple fact of asking customers how a company was performing by itself proved to be a great customer retention strategy. In the research study, conducted over the course of a year, one set of customers were sent out a satisfaction and opinion survey and the other set was not surveyed. After a year, twice the number of people continued and renewed their loyalty towards the company in the group that took the survey.

The research study offered a couple of interesting rationales based on consumer psychology, behind this phenomenon:

1. Satisfaction Surveys reinforce the customers desire to be coddled and reinforce positive feelings.

This stems from part of the human psychology that wants to "appreciate" a product or service they already like. The survey feedback loop is merely a tool to express this. The survey is a vehicle to "interact" with the company and reinforces the customer's commitment to the company.

2. Surveys may increase awareness of auxiliary products and services.

Surveys can be considered vehicles of communication - both inbound as well as outbound. Most people consider surveys as a data collection exercise. When conducting consumer surveys, they can also serve as a medium for disseminating information. It is important to note a few caveats here.

a. In most countries including the US, "selling under the guise of research" is illegal.

b. However, we all know that information is disseminated while collecting information.

c. Additional disclaimers may be added to the survey to make users aware of this fact. Eg: "We will be collecting your opinion and informing you about products and services that have come online in the last year..."

3. Induced Judgments

The very process of asking people their opinion can induce them to form an opinion on something they otherwise would not have considered. This is a very subtle and powerful argument. This argument is analogous to the "Product Placement" strategy currently used for marketing products in mass-media like movies and television shows. One example is the extensive and exclusive use of the "mini-Cooper" in the blockbuster movie "Italian Job." This strategy is questionable and should be used with great caution.

Surveys should be considered as a critical tool in the customer relationship dialog. The best thing about surveys is its ability to carry "bi-directional" information. The research conducted by Paul Dholakia and Vicki Morwitz shows that surveys not only get you the information that is critical for your business, but also enhances and builds upon the established relationship you have with your customers.

Recent advances in technology have made it incredibly easy to conduct real-time surveys and opinion polls. Online tools make it easy to frame questions and answers, and create surveys on the Web. Distributing surveys via email, website links or even integration with online CRM tools like Salesforce.com have made online surveying a quick-win solution.

Key Facts
- **Online surveys can capture data fast and easily**
- **Surveys can also act as outbound message delivery agents**

Survey Mode : Phone vs. Online vs. In-Person Interviews

Essentially there are four choices for data collection – in-person interviews, mail, phone and online. There are pros and cons to each of these modes.

In-Person Interviews
Pros: In-depth and a high degree of confidence on the data
Cons: Time consuming, expensive and can be dismissed as anecdotal

Mail Surveys
Pros: Can reach anyone and everyone – no barrier
Cons: Expensive, data collection errors, lag time

Phone Surveys
Pros: High degree of confidence on the data collected, reach almost anyone
Cons: Expensive, cannot self-administer, need to hire an agency

Web/Online Surveys
Pros: Cheap, can self-administer, very low probability of data errors
Cons: Not all your customers might have an email address/be on the internet, customers may be wary of divulging information online.

In-Person interviews always are better, but the big draw-back is the trap you might fall into if you don't do them regularly. It is expensive to regularly conduct interviews and not conducting enough interviews might give you false positives. Validating your research is almost as important as designing and conducting it. We've seen many instances where after the research is conducted – if the results do not match up with the "gut-feel" of upper management, it has been dismissed off as anecdotal and a "one-time" phenomenon. To avoid such traps, we strongly recommend that data-collection be done on an "ongoing and regular" basis. This will help you compare and contrast how perceptions change depending upon how you market your product or service. The other issue here is sample size. To be confident with your research you have to interview enough people to weed out the fringe elements.

A couple of years ago there was quite a lot of discussion about online surveys and their statistical validity. The fact that not every customer had internet connectivity was one of the main concerns. Although some of the discussions are still valid, the reach of the internet as a means of communication has become vital in the majority of customer interactions. According to the US Census Bureau the number of households with computers has doubled between 1997 and 2001. In 2001 nearly 50% of the households had a computer. Nearly 55% of all households with an income of more than 35,000 have internet access, and this jumps to 70% for households with an annual income of 50,000. This data is from the US Census bureau for 2001.

There are primarily three modes of data-collection that can be employed to gather feedback – Mail, Phone and Online. The actual mode used for data-collection is really a cost-benefit analysis. There is no slam-dunk solution but you can use the table below to understand the risks and advantages associated with each of the mediums: -

Survey Medium	Cost per Response	Data Quality/Integrity	Reach (ALL US Housholds)
Paper	$20 – $30	Medium	100%
Phone	$20 - $35	High	95%
Online / Email	$1 - $5	Medium	50-70%

Keep in mind, the reach here is defined as "All US Households." In most cases, you need to take a look at how many of your customers are online and make a determination. If all your customers have email addresses, you have a 100% reach of your customers.

Another important thing to keep in mind is the ever-increasing dominance of cellular phones over land-line phones. United States FCC rules prevent automated dialing and calling cellular phone numbers and there is a noticeable trend towards people having cellular phones as the only voice communication device. This introduces the inability to reach cellular phone customers who are dropping home phone lines in favor of going entirely wireless. Even if automated dialing is not used, another FCC rule prohibits from phoning anyone who would have to pay for the call. Almost all cellular phone services in the US charge for incoming airtime.

Multi-Mode Surveys
Surveys where the data is collected via different modes (online, paper, phone etc.) is also another way of going. It is fairly straightforward and easy to have an online survey and have data-entry operators to enter in data (from the phone as well as paper surveys) into the system. The same system can also be used to collect data directly from the respondents.

Key Facts
- **Use online surveys if you have email addresses of your customers**
- **Use multi-mode surveys for collecting "offline" data**

Conducting and Online Survey – Effectively

So, you've decided to conduct an online survey. There are a few questions in your mind that you would like answered and you are on the lookout for a fast and inexpensive way to find out more about your customers, clients etc. The first and foremost thing you need to decide what the objectives of the study are. Ensure that you can phrase these objectives as questions or measurements. If you can't, you are better off looking at other means of gathering data like focus groups and other qualitative methods. Online Surveys tend to focus in on more on "Quantitative" data collection.

Review the basic objectives of the study. What are you trying to discover? What actions do you want to take as a result of the survey? This helps you double check the validity of the data collection mechanism. Online Surveys are just one way of collecting and quantifying perspectives.

1. **Visualize all of the relevant information items** you would like to have. What will the output report look like? What charts and graphs will be prepared? What information do you need to be assured that action is warranted?

2. **Rank each topic in items 1 and 2** according to the value of the topic. List the most important topics first. Revisit items 1 and 2 again to make sure the objectives, topics and information you need are appropriate. Remember, you can't solve the problem if you ask the wrong questions.

3. **How easy or difficult is it for the respondent to provide information** on each topic? If it is difficult, is there another way to obtain the information by asking another question?

   This is probably the most important step. Online Surveys have to be Precise, Clear and Concise. Due to the nature of the "Web" and the fickleness associated, if your questions are too complicated and are not easy to understand, you will have a high "drop out" rate.

4. **Create a sequence for the topics that is unbiased.** Make sure that the questions asked first do not bias the results of the next questions. Sometimes providing too much information, or disclosing purpose of the study can create bias.

   Once you have a sequence of topics, you can have a basic layout of a survey. It is always prudent to add an "Introductory" text to explain the project and what is required off the respondent. It is also professional to have an ending "Thank You" text as well as information about where to find the results of the survey, when they are published.

5. **Determine the type of question that is best suited** to answer the question and provide enough robustness to meet analysis requirements. This means do you use open-ended text questions, dichotomous, multiple choice, rank order, scaled, or constant sum (ratio scale) questions. There is a fine line you need to walk here - Generally tougher analysis requirements will lead to more complicated questionnaire design. However there are a couple of tools available to make life easier: -

   1. **Page Breaks** - Avoid having a huge scrolling survey. Introduce page breaks as necessary. Please also refrain from just having one question per page. This increases the time to complete the survey as well as increases the chances for "drop outs".

2. **Branching** - Use Branching and Skip Logic to make your surveys "Smart". Avoid using text like, "If you answered No to Q1 then Answer Q4" - this causes respondent frustration and increases the "drop out" rate. Design the survey using Branching Logic so that the correct questions are automatically routed based on previous responses.

6. **Write the questions.** You may need to write several questions for each topic, selecting the best one. You might also be better off dividing the survey into multiple sections.

7. **Sequence the questions** so that they are unbiased.

8. **Repeat all of the steps above** to find any major holes. Are the questions really answered? Have someone review it for you.

9. **Time the length of the survey.** A survey should take less than five minutes. At three to four questions per minute, you are limited to about 15 questions. One open end text question counts for three multiple choice questions. Most online software tools will record the time taken for the respondents to answer questions.

10. **Pretest the survey to 20 or more people.** Obtain their feedback... in detail. What were they unsure about? Did they have questions? Did they have trouble understanding what you wanted? Did they take a point of view not covered in your answers or question?

    1. An easy way to do this is to create another survey, with a few "open ended" essay questions along with your main project. Let's call this the "feedback survey".
    2. Email the "Project" survey to your test group and then email the "feedback" survey also after that.
    3. In that way, you can have your test group send you comments regarding the functionality as well as usability of your "Project" survey by using you "feedback survey"!

11. **Revise your online questionnaire** using incorporating the feedback that you got.

12. **Send the Survey** out to all your respondents!

Online surveys are a great alternative to expensive mail or telephone surveys. There are a few caveats to online surveys however that you must be aware of. If you are trying to survey a representative sample of the general population, please bear in mind that not everyone is online. Moreover, not everyone is receptive to online survey also. Our research has shown that the demographic that responds to online survey invitations is generally biased toward younger people.

Survey Design

Writing Great Questions for Online Surveys

Writing great questions is an art that like all arts requires a great amount of work, practice, and help from others. The following discussion is one that identifies some of the common pitfalls in creating a great questionnaire.

Avoid loaded or leading words or questions
Slight wording changes can produce great differences in results. Could, Should, Might all sound almost the same, but may produce a 20% difference in agreement to a question (The supreme court could.. should.. might.. have forced the breakup of Microsoft Corporation). Strong words that represent control or action, such as prohibit produces similar results (Do you believe that congress should prohibit insurance companies from raising rates?) Sometimes wording is just biased: You wouldn't want to go to Rudolpho's Restaurant for the company's annual party would you?

Misplaced questions
Questions placed out of order or out of context should be avoided. In general, a funnel approach is advised. Broad and general questions at the beginning of the questionnaire as a warm-up. Then more specific questions, followed by more general easy to answer questions like demographics.

Mutually non-exclusive response categories
Multiple choice response categories should be mutually exclusive so that clear choices can be made. Non-exclusive answers frustrate the respondent and make interpretation difficult at best.

Nonspecific questions
Do you like orange juice? This is very unclear...do I like what? Taste, texture, nutritional content, Vitamin C, the current price, concentrate, fresh squeezed? Be specific in what you want to know about. Do you watch TV regularly? (what is regularly?).

Confusing or unfamiliar words
Asking about caloric content, bits, bytes, mbs, and other industry specific jargon and acronyms are confusing. Make sure your audience understands your language level, terminology and above all, what you are asking.

Non-directed questions give respondents excessive latitude
What suggestions do you have for improving tomato juice? The question is about taste, but the respondent may offer suggestions about texture, the type of can or bottle, mixing juices, or something related to use as a mixer or in recipes.

Forcing answers
Respondents may not want, or may not be able to provide the information requested. Privacy is an important issue to most people. Questions about income, occupation, finances, family life, personal hygiene and beliefs (personal, political, religious) can be too intrusive and rejected by the respondent.

Non-exhaustive listings
Do you have all of the options covered? If you are unsure, conduct a pretest using the "Other (please specify) _____" option. Then revise the question making sure that you cover at least 90% of the respondent answers.

Unbalanced listings

Unbalanced scales may be appropriate for some situations and biased in others. When measuring alcohol consumption patterns, One study used a quantity scale that made the heavy drinker appear in the middle of the scale with the polar ends reflecting no consumption and an impossible amount to consume. However, we expect all hospitals to offer good care and may use a scale of excellent, very good, good, fair. We do not expect poor care.

Double barreled questions

What is the fastest and most convenient Internet service for you? The fastest is certainly not the most economical. Two questions should be asked.

Dichotomous questions

Make sure answers are independent. For example the question "Do you think basketball players as being independent agents or as employees of their team?" Some believe that yes, they are both.

Long questions

Multiple choice questions are the longest and most complex. Free text answers are the shortest and easiest to answer. When you Increase the length of questions and surveys, you decrease the chance of receiving a completed response.

Questions on future intentions

Yogi Berra once said that making predictions is difficult, especially when they are about the future. Predictions are rarely accurate more than a few weeks or in some case months ahead.

Key Facts
- **Make sure questions are simple and easy to understand**
- **Include the "Other" option when you are not sure**

Survey Question and Answer Types

So you've decided that you need a better understanding of the characteristics of people who visit your website, or of some other business-related question. Developing a focused and effective questionnaire will help you to efficiently and accurately pinpoint the information that will help you make more informed decisions.

Developing a questionnaire is as much an art as it is a science. And just as an artist has a variety of different colors to choose from in the palette, you have a variety of different question formats with which to question an accurate picture of your customers, clients and issues that are important to them.

The Dichotomous Question

The dichotomous question is generally a "yes/no" question. An example of the dichotomous question is:

Have you ever purchased a product or service from our website?

- o Yes
- o No

If you want information only about product users, you may want to ask this type of question to "screen out" those who haven't purchased your products or services. Researchers use "screening" questions to make sure that only those people they are interested in participate in the survey.

You may also want to use yes/no questions to separate people or branch into groups of those who "have purchased" and those who "have not yet purchased" your products or services. Once separated, different questions can be asked of each of these groups.

You may want to ask the "have purchased" group how satisfied they are with your products and services, and you may want to ask the "have not purchased" group what the primary reasons are for not purchasing. In essence, your questionnaire branches to become two different sets of questions.

The Multiple Choice Questions

The multiple-choice question consists of three or more exhaustive, mutually exclusive categories. Multiple choice questions can ask for single or multiple answers. In the following example, we could ask the respondent to select exactly one answer from the 7 possible, exactly 3 of the 7, or as many as 3 of the 7 (1,2,or 3 answers can be selected).

Example: A multiple-choice question to find out how a person first heard about your website is:

How did you first hear about our web site?

- o Television
- o Radio
- o Newspaper
- o Magazine
- o Word-of-mouth
- o Internet
- o Other: Please Specify _____

For this type of question it is important to consider including an "other" category because there may be other avenues by which the person first heard about your site that you might have overlooked.

Rank Order Scaling

Rank order scaling questions allow a certain set of brands or products to be ranked based upon a specific attribute or characteristic. Perhaps we know that Toyota, Honda, Mazda, and Ford are most likely to be purchased. You may request that the options be ranked based upon a particular attribute. Ties may or may not be allowed. If you allow ties, several options will have the same scores.

Example:

Based upon what you have seen, heard, and experienced, please rank the following brands according to their reliability. Place a "1" next to the brand that is most reliable, a "2" next to the brand that is next most reliable, and so on. Remember, no two cars can have the same ranking .

__ Honda
__ Toyota
__ Mazda
__ Ford

The Rating Scale

A rating scale question requires a person to rate a product or brand along a well-defined, evenly spaced continuum. Rating scales are often used to measure the direction and intensity of attitudes. The following is an example of a comparative rating scale question:

Which of the following categories best describes your last experience purchasing a product or service on our website? Would you say that your experience was:

o Very pleasant
o Somewhat pleasant
o Neither pleasant nor unpleasant
o Somewhat unpleasant
o Very unpleasant

The Semantic Differential Scale

The semantic differential scale asks a person to rate a product, brand, or company based upon a seven-point rating scale that has two bi-polar adjectives at each end. The following is an example of a semantic differential scale question.

Example:
Would you say our web site is:

o (7) Very Attractive
o (6)
o (5)
o (4)
o (3)
o (2)
o (1) Very Unattractive

Notice that unlike the rating scale, the semantic differential scale does not have a neutral or middle selection. A person must choose, to a certain extent, one or the other adjective.

<u>The Stapel Scale</u>
The staple scale asks a person to rate a brand, product, or service according to a certain characteristic on a scale from +5 to -5, indicating how well the characteristic describes the product or service. The following is an example of a staple scale question:

When thinking about Data Mining Technologies, Inc. (DMT), do you believe that the word "innovative" aptly describes or poorly describes the company? On a scale of +5 to -5 with +5 being "very good description of DMT" and -5 being "poor description of DMT," how do you rank DMT according to the word "innovative"?

- o   (+5) Describes very well
- o   (+4)
- o   (+3)
- o   (+2)
- o   (+1)
- o   Innovative
- o   (-1)
- o   (-2)
- o   (-3)
- o   (-4)
- o   (-5) Poorly Describes

<u>The Constant Sum Question</u>
A constant sum question permits collection of "ratio" data, meaning that the data is able to express the relative value or importance of the options (option A is twice as important as option B).

Example:
The following question asks you to divide 100 points between a set of options to show the value or importance you place on each option. Distribute the 100 points giving the more important reasons a greater number of points. The computer will prompt you if your total does not equal exactly 100 points.

When thinking about the reasons you purchased our TargetFind data mining software, please rate the following reasons according to their relative importance.

Seamless integration with other software _____
User friendliness of software   _____
Ability to manipulate algorithms   _____
Level of pre- and post-purchase service   _____
Level of value for the price   _____
Convenience of purchase/quick delivery _____
Total   100 points

This type of question is used when you are relatively sure of the reasons for purchase, or you want input on a limited number of reasons you feel are important. Questions must sum to 100 points and point totals are checked by javascript.

The Open-Ended Question

The open-ended question seeks to explore the qualitative, in-depth aspects of a particular topic or issue. It gives a person the chance to respond in detail. Although open-ended questions are important, they are time-consuming and should not be over-used. An example of an open-ended question might be:

(If the respondent indicates they did not find what they were looking for...)

What products of services were you looking for that were not found on our website?

If you want to add an "Other" answer to a multiple choice question, you would use branching instructions to come to an open ended question to find out What Other....

The Demographic Question

Demographic questions are an integral part of any questionnaire. They are used to identify characteristics such as age, gender, income, race, geographic place of residence, number of children, and so forth. For example demographic questions will help you to classify the difference between product users and non-users. Perhaps most of your customers come from the Northeast, are between the ages of 50 and 65, and have incomes between $50,000 and $75,000.

Demographic data helps you paint a more accurate picture of the group of persons you are trying to understand. And by better understanding the type of people who use or are likely to use your product, you can allocate promotional resources to reach these people, in a more cost effective manner.

Psycho-graphic or life style questions are also included in the template files. These questions provide an in-depth psychological profile and look at activities, interests and opinions of respondents.

Key Facts
- **Choose the question type that satisfies your analysis requirements**
- **Demographic questions are nice to have but not necessarily required**

Ten Easy Ways to Increase Response Rates for Your Online Survey

1. Target your audience.
Consider a variety of sources for possible respondents. In addition to email mailing lists, for example, consider posting your survey to newsgroups and web communities.

2. Personalize your email invitations
Emails with a personal salutation result in increased response rates of at least five percent, and sometimes much higher. Send your email to "Dear Mr. Wright" rather than "Dear Valued Alumni."

3. Keep your email invitation short
Please keep your email invitation short and simple, with just one link - the one to the survey. Please be sure to explain the following: -

- Who you are and the purpose of your study
- The survey's benefit to the individual as well as to your length of survey - if it is short, emphasize that. But be truthful about times - people are more likely to stick with longer surveys if they know about how much time they will take
- Privacy statement, if required by your organization.

.
4. Make your first survey page simple - let people take the survey!
Once people have decided to take your survey, they will want to get started. Studies show most people don't read extensive instructions.

5. But -- be clear about privacy protections
The first page of the survey is the place to include information about how you will be using people's responses. People are more comfortable sharing information on the Internet if they know how it will be used. Are they anonymous? Confidential? Shared with others? A university human subjects statement, if needed, would go here.

6. Send reminder emails
Some people will take your survey right away. You will get increased responses, however, if you send follow-up email reminders with the survey link included. It is best not to send more than two reminder emails. Be sure to filter out email addresses of people who do not wish to be contacted again.

7. Consider offering incentives - gifts, prizes, etc.
Studies show that incentives need not be large to increase response rates. A small token, gift certificate, etc., can increase responses considerably.

8. Some people just want to share their opinion!
A large number of people will complete a survey to share their information rather than to receive an incentive. Consider making your incentive optional - you must choose to be included in a raffle or donating to a relevant cause for example.

9. Use graphics and Internet features strategically
Surveys generally don't need fancy graphics, and sometimes graphics can distract from the content of the survey, or influence answers. But there are a few ways to use graphics to improve

your survey responses. These include providing an image and web link for a prize or incentive, using a multimedia embedded content survey.

10. Publish your results online to survey participants.
People who respond will want to see results, and getting these results will encourage them to complete the survey.

And a bonus?
Use friends, family and colleagues targeting Use your respondents to share your survey to interested. Offer respondents an opportunity to send the survey to others, and if their friends and family take the survey, the original respondent has a better chance of winning/earning a gift incentive. This can be easily achieved by collecting email addresses as part of the survey.

Key Facts
- **Personalize email invitation where possible**
- **Publish your results online to all the participants**

Customer Satisfaction – Uncovering the Puzzle

Measuring Customer Loyalty and Customer Satisfaction for your business - How to get it done in less than a day!

Most businesses are faced with a fairly straightforward question today - How do I measure success? Obviously looking at the balance sheet every month can give you some insights into how you are doing. However most of us know that this is too late in the game to be pro-active in terms of how you react to your customers needs.

We also understand that customer satisfaction and loyalty is intrinsically coupled to the well-being and long term growth of the company. In other words, the success of your company depends on how satisfied and loyal your customers are. We are also aware of the fact that acquiring new customers is about ten times more expensive than servicing existing customers. Very simply put, loyal customers decrease acquisition costs and increase profitability.

The question always arises: "How do I effectively gauge the satisfaction and loyalty paradigms?". It is not as difficult as you may think.

Amazingly, a single question can give you the insight you need:

"How likely is it that you will recommend [Product X or Company] to a friend or colleague?"

Have them rate the answer on a 1-10 Scale. You can then categorize the responses into three different categories:

Score

8-10	These are your "Promoters" or your "Idea Merchants" - Very satisfied and will trumpet your product or service any chance they get.
5-7	They are your "Passively Satisfied" customers.
1-4	They are the "Detractors" - fairly unsatisfied with you - Most likely to leave you for a competing product or service.

Now the analysis is pretty simple. If you have 60-70% of your customer base with a score between 8-10 you have a "word-of-mouth" sales force working for you 24x7. They are happy with your product offering and are willing to put their reputation on the line for you by recommending your product or service.

Another important measurement is the "Net Growth/Satisfaction" score. This is the percentage of "Promoters" minus the percentage of "Detractors" - this gives you a net indication of how many customers are effectively "growing" your company.

Now the question is: "Why is this approach more effective than traditional 'Customer Satisfaction Surveys'?" The answer lies in the statistical phenomenon call "sample bias". Most traditional "Customer Satisfaction Surveys" tend to be long, cumbersome and demand a lot of time and attention from your customers. This leads to a very low "response rate" for your customer satisfaction surveys. This low response rate in turn does not accurately represent your customer

base. For example, customers who are unhappy are not likely to go though a long customer satisfaction survey.

The other problem with traditional satisfaction surveys is that they are very difficult to analyze and produce ambiguous results - they are hence not acted upon by upper management and dismissed.

On the other hand, if your customers get an email with a single question embedded, the response rate to such a small survey will be much higher. The higher response rate will eliminate the "sample bias" and you have the relevant data that you need.

Some Real-Life Examples:

QuestionPro
We at QuestionPro believe in "Practice what you preach" - Every time an active user clicks the "Logout" button when they are finished with their work, a single question is presented to the user : This question is randomly selected from a pool of pre-defined questions - Feedback on features, comments, satisfaction etc.

We have consistently seen that the response rate on the "Recommend to Friend/Colleague" question has always been higher than all the other questions. This process helps us achieve a couple of things: -

1. Enables us to "Continuously" monitor our satisfaction score. Any dips and spikes can be quickly co-related to "marketing events"
2. Enables us to set goals for our support and marketing staff. This is directly tied to the compensation structure to make sure all of us are aligned to serve our customers as best as we can.

Enterprise Rent-A-Car
This example is cited in Frederick F. Reichheld's Harvard Business Review Article.

Every month Enterprise polls its customers just two simple questions:

- Quality of Service
- Likelihood that they will rent from Enterprise Again.

Since the process was simple, it was fast and published the results of the 5000 US branches in real-time. This gave all the offices real-time feedback on how they were doing and the opportunity to learn from successful peers.

Implementation Guide
After all the title of the article does say how to get this done in "under a day" - the world of online self-service tools has paved the path for such technical implementation without the hassle of servers, software installations etc. Although there are other server based solutions available we will focus on 4 important factors:

- *Self-Service* - If you want to get a solution rolled out in 1 day you should be able to use a point-and-click interface to create and deploy the survey.

- *Online and Web-Based* - No software to install and no special requirements. Should be able to create a survey using a Mac/Linux/Windows from home or office or the beach using a wireless PDA!
- *Integrated Analysis Tools* - No need for third-party analysis programs needed. This just increases frustration.
- *Cheap - Monthly billing - No long term contracts* - For obvious reasons!

To Quote Frederick F. Reichheld's Harvard Business Review Article:

"The path to sustainable, profitable growth begins with creating more promoters and fewer detractors and make the net-promoter number transparent throughout your organization. This number is the one number you need to grow. It is that simple and that profound."

The quote underscores this basic concept. Online tools not only make it easy to implement such solutions but also assist you in pro-actively measuring the success of your relationship with your customers. A project that used to be a 3-6 month IT effort a few years ago can now be accomplished in a single day. Companies that take advantage of such process efficiency to further their own goals will have a distinct advantage over companies that ignore them.

Key Facts
• **Have a single ongoing survey to measure loyalty** • **Track your loyalty score regularly**

Conducting an effective Customer Satisfaction Program for your business

"If done sincerely, everyone appreciates it when someone seeks their opinion"

Businesses today realize that one of the keys to success in the competitive marketplace is effective customer management. Companies see customer relationship as a strategic advantage and have invested a lot of effort in making sure that Customer Relationship Management (CRM) is high on the priority list. However, few companies have invested effort in terms of having a continuous measurement strategy that can signal potential dips in real-time.

With the explosive growth of Do-It-Yourself research projects using online surveys, conducting customer satisfaction surveys has become more of an in-house operation. Many companies are asking themselves – How can we improve if we can't effectively measure?

Customer satisfaction programs generally answer this question. We believe that for a customer satisfaction program to be effective and accepted, it should be more than just one survey that is sent out to all your customers annually. It should be an ongoing strategy of continuous measurement and improvement based on the feedback received. Validation of the improvements can be measured directly in the forms of satisfaction indices.

In today's competitive climate, collecting reliable customer feedback throughout the entire life cycle of customers, from initial purchase to product delivery to post-purchase support, is essential. The relative cost effectiveness and low maintenance requirements of online surveys make it an ideal medium for collecting continuous feedback from customers at key stages in their relationship with your business.

With the advent of online ASP based software solutions for CRM as well as online surveys, implementing a customer satisfaction program does not need a $100,000 budget. A simple and effective customer satisfaction program can be instituted for as little as $3000 per year. However, the lower cost comes with some caveats. With the do-it-yourself strategy, although you can reign in costs, you also have to do the work yourself (as the term implies) – You can however follow some guiding strategies and principles that can help you avoid making tactical mistakes.

Here we will go through the following items that can help you get familiar with the different issues (and possible mitigation strategies) on conducting an effective customer satisfaction program for your business.

1. The Core Tenets of a Program
   a. Customer Satisfaction
   b. Measuring Importance
   c. Customer Loyalty
2. The Satisfaction Index
3. Non-Respondent Bias
4. Less is more – Keep your surveys short
5. Executive visibility and Business Decision Makers' buy in

The Core Tenets – Satisfaction, Importance and Loyalty

Most customer interaction studies have a couple of core issues that we'd like to measure:
   a) Satisfaction – How satisfied are your customers with respect to the various services and attributes of your engagement with them:
      a. Overall Product/Service Satisfaction
      b. Pre-Sales Support
      c. Ongoing Support and Customer Service

       d.   Cancellation reasons and drop-outs

b) Importance – What is really important to your customers and what is not? For example, if most of your customers think on-site support is not very important, having a high satisfaction score on that will not significantly affect the bottom-line.

c) Loyalty – What do your customers think about you really and how they perceive your services. With the high cost involved in the acquisition of new customers (about 10x) this usually plays a critical role in the development of your business and services that you provide. For most businesses, customer retention directly affects the profitability.

For each of the core tenets above (Satisfaction, Importance, Loyalty) we'll try and summarize three things:

      a) Effective strategies for presentation and data collection.
      b) Real-Live example
      c) Options for data-analysis and interpretation

Satisfaction:
Effective strategies for presentation

        For the most part, in our opinion, a 5 item scale (Very Dissatisfied -> Very Satisfied) battery of options has a fairly low degree of cognitive stress. The 5 point scale has enough options usually to accommodate the spectrum of social perception. A battery of options (matrix) is generally preferred because of the following reasons:

1. It gives users a reference point. For example, asking a user to rate their satisfaction with the product purchase experience on one screen and customer service experience on another screen does not give the same frame of reference.

2. Visual real-estate occupied is less – this leads to a more effective presentation.

The basic principle is to put together a list (between 3 and 7) of "components" of your service that you'd like to measure. Add in a final "Overall" satisfaction rating also.

Real Life Example : QuestionPro

Please tell us how satisfied (or not) you are with each of the following aspects of QuestionPro

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied
The Registration Process					
Survey Authoring/Building					
Survey Distribution					
Survey Analysis					
Overall					

Options for data-analysis and interpretation

    a) Mean score across all the respondents for each option. You can assume a score of 1-5. Obviously the closer the mean for each of the options is to 5 the better you are.

    b) Relative Mean Score. Here you look at the mean of each of the options when compared to each other. This will give you a good idea about the relative satisfaction scores when the components are put against each other.

    c) We believe that it is important to collect the "overall" satisfaction score along with the "component" satisfaction scores. There are a couple of reasons for this:

        a. The "overall" satisfaction score should be close to the average satisfaction scores of the individual components. If the overall satisfaction is way out of line from the other component scores it usually means that there is some form of bias taking place, or we are missing out some component in the matrix.
        b. Regression analysis can be performed on the data to give out importance scores for each of the components.

Importance

Now for the fun part. Generally when customers are comparison shopping, they are really comparing options that are important to them. Measuring importance of the different components of your product or service is a little more challenging than measuring satisfaction. This is because importance is generally relative. As Fred Van Bennekom in his excellent article points out – When taking a flight what is important and what is very important? Price? Skymiles? No Stopovers? Comfortable seats? Different people have widely different perception of importance and need.

Accordingly, we simply cannot take the same approach we took with measuring satisfaction. A five point scale (Not Very Important -> Very Important) is simply not going to give you the data that can be called actionable. Moreover, having another 5 point scale that looks and feels very much like the previous (satisfaction) scale becomes monotonous and uninteresting. Remember, we always strive to make the survey engaging.

Effective strategies for presentation

In our opinion the easiest and the most effective way of measuring importance is having a simple multiple choice question (Select more than one option) – display all the components and have your users choose the top 3 factors that they consider important. This approach has the following advantages and disadvantages:

Pros:

    1. Simple – Users can check 3 out of a list of 7 items.
    2. Simple – Users don't have to worry about ranking the three items they are selecting.
    3. Simple – Users don't feel overwhelmed with another "battery of questions"

Cons:

    1. Detailed segmentation cannot be obtained. It is not possible to determine the relative importance ON A PER USER LEVEL.

Real Life Example : QuestionPro

Choose the **three most** important issues you consider when selecting an online survey vendor:

_ Ease of Use
_ Detailed customization and presentation capabilities
_ Monthly Billing Option
_ Robust analysis capabilities
_ Prompt email based customer service
_ Immediate phone based customer service
_ Ability to upload and send large volumes of survey invitation

Options for data-analysis and interpretation
There are two parts to the data analysis that can guide us here. Basic frequency analysis as well as TURF analysis:

Frequency Analysis
We can do a simple frequency analysis of all the respondents. The top three important issues for all the respondents should be visible immediately. The relative frequencies can give you an idea of the importance ratings for each of the options.

TURF Analysis
TURF analysis is traditionally used to measure "reach" in a multiple choice questions (with users allowed to choose more than 1 option) – however, TURF can also be used in other contexts such as measuring importance. TURF analysis allows you to look at the data from an option reach perspective. It answers questions like: "If I address this component/option I'll connect with 80% of my customers"

Loyalty:
One of the most effective measures of loyalty is to measure the degree to which your customers will vouch for you. If you customers go out of their way to recommend your product or service to others, it's an effective measure of their perception.

Effective strategies for presentation
Again, in our opinion simplicity is the key. A single question can get you a measure of how loyal your customers are towards you. Asking your customers how likely are they to recommend your product or service to their colleagues and friends, gives you a fairly good indication of how they perceive your service or product.

Real Life Example : QuestionPro

How likely are you to recommend QuestionPro to your friends or colleagues?
_ Very Likely
_ Maybe
_ Never

Options for data-analysis and interpretation
If your mean for this question is close to 1 (option 1) you should be in good shape. For a positive growth environment, the mean should be between 1 and 1.5. Most of your customers should feel good about recommending your services or products to others.

A great deal of research has already been done and shown that customer loyalty is intrinsically tied to the fact that people still value word-of-mouth.

The Satisfaction Index
What is a Customer Satisfaction Index? Indices are very popular (University of Michigan – Consumer Confidence Index, The Conference Board's Consumer confidence index etc.) in part because of their ability to effectively and accurately represent the underlying data with a single number. The indices in absolute terms do not have much value. It is the rise (or fall) of the value of indices that actually make a difference.

Generally indices are developed based on specific models. These models are specific to industries and are really beyond the scope of the current discussion. However, it is fair to say that indices are mathematical representations of the different components of the data that you collect.

In our example above:
"Please tell us how satisfied (or not) you are with each of the following aspects of QuestionPro"

The model we use is as follows:

QP-Satisfaction Index = ([Mean(Registration-Process) * .5] + [Mean (Survey Authoring) x 1] +
        [Mean (Survey Distribution) x 1] + [Mean (Survey Analysis) x 1]) / 3.5

All we are doing here is "weighting down" the "Registration Process" component down (.5) – because we believe that the "Registration Process" is half as important as the other components.

We track the QP-Satisfaction Index on a daily/weekly basis and it is directly reflective of how we are doing as a company.

As you can see above, the indices need not be very complicated. You can start off simple and as time goes along adjust the model to fit what you believe is correct.

Non-Respondent Bias
With the online survey process, long and unwieldy online surveys are becoming very popular. It is relatively easy and tempting to create long surveys so that granular data points are collected. While on one hand this gives you all the data you need to make and affect business decisions, it also introduces in important concept in online research called non-respondent bias.

What exactly is Non-Respondent Bias? Let's say you have 200 customers, and you send out a customer satisfaction survey to all of them. You get a response rate of 20% -- So you have 40 responses to the survey. Now, the question is – Do these 40 customers speak for all your customers? How confident are you that the responses that 20% of your customer base is giving you can be taken and applied to most of your customers. What if only the very satisfied or the very dissatisfied customers actually took the time to complete the survey? Non-Respondent Bias is the bias or the skew in the analysis and interpretation of your data due to the fact the large percentage of your respondents did not complete the survey.

While there are many effective ways for making sure your response rates are high enough, our experience and research has shown that the primary factor responsible for not completing surveys is the length of the survey. While promotions and incentives will always increase the response rates, they are mechanisms for working around the issue – not fix the core issue i.e. keep your surveys short and simple.

Less is more – Keep your surveys short
So, how do you balance out your analytical and business requirements and still keep your surveys interesting and short to keep your response rates high. Obviously it's a balancing game here – This is part of what Market Research agencies and consultants do. However, there are certain things that we can suggest, that can help mitigate this issue:

a) Design the survey to collect data that is actionable – Ask yourself some basic questions
   a. Do you really need a large demographic data? Do you care if your customer is a male or a female?
   b. Always allow users to enter in open-ended text. Monitor this while in pre-trial mode or testing mode. This can give you some very quick insight into what users think about your survey in general.

b) Anecdotal vs. Tracking Surveys – Think about the methodology you are going to use to collect data. Are you going to do a one-time survey or is the data going to be collected over a large period of time for continuous tracking. Continuous tracking surveys can be short and still accomplish the analysis objectives. Single (one-time) surveys usually need to collect more data. Can your business and data-collection objectives be prioritized and multiple surveys sent out over the course of the customer-lifecycle to collect data?
   - Send pre-sales surveys to potential customers.
   - Send post-sales surveys to newly acquired customers
   - Send regular satisfaction surveys to ongoing customers
   - Send Exit/Close out Surveys to customers walking away

c) Keep cognitive stress to a minimum – What is cognitive stress? – Have you ever filled out a survey/form where you were asked to distribute 100 points over a set of say five items? It's not rocket-science but it frustrates a lot of people. This frustration will directly affect the response rate.

Executive Visibility and Business Decision Makers' buy in:
The success of a customer satisfaction program, in a large part will depend upon how comprehensively and cohesively can the data be presented to the business decision makers. One of the challenges that in-house (as well as external research) projects face constantly is that if the data is significantly different that what the business decision makers think, it is often dismissed off as anecdotal or a one-time phenomenon. To mitigate this issue, we strongly suggest exploring options of running a program that is continuous and real-time feedback can be provided to the executive management ON DEMAND. Solutions like Customer Satisfaction Dashboards come in very handy for such buy in and it also builds confidence in the solution.

The key to success for any customer satisfaction research study is dependant upon how well you manage the conflicting data-analysis requirements with the need for simplicity. Customer satisfaction studies need not be all-encompassing. They can be short and give you the necessary data-points needed for to make informed business decisions. You can leverage technology to segment out populations that need further data-collection (Very Unsatisfied users etc.) and try to delve into the reasons for their customer experience. Remember, you can never improve what you cannot measure effectively.

Key Facts
- **Keep it Simple**
- **Have a continuous measurement and feedback loop**

Survey Results and Analysis

Frequency Analysis – Cross-tabulation and Segmentation

Analyzing data from online surveys is probably one of the most interesting aspects of the whole "Online Survey" experience. It is important to understand the "Numbers" before you can claim your research to be successful. Here we will provide you with the different analysis options available and what they really mean.

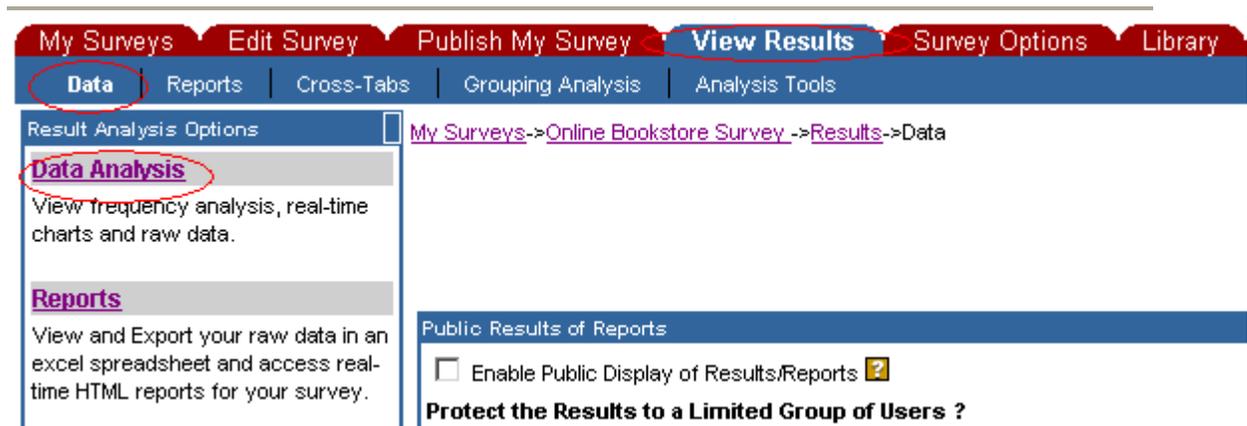At QuestionPro we offer a couple of analysis tools that make data analysis incredibly easy: -

1. Basic Frequency Analysis
2. Cross Tabulation Analysis (Banner Tables)
3. Grouping and Segmentation Analysis

I. Basic Frequency Analysis

Frequency analysis gives you an "Overall" insight into the responses for your survey. General questions like:-

- What is the % of people who responded to my survey are males?
- What is the average age of people who responded to the survey?

To access the data, click on View Results Tab.

Then choose the question you are interested in...

Clear All Responses

⚠ Please note that once cle the data will not be able to b retreived for analysis.

Clear

Survey Results Analysis

#	Question					
1	How many online purchases have you made in the last month?	Data	Charts	(Pie	Bar	Line)
	The ease of use of [WEBSITE].com	Data	Charts	(Pie	Bar	Line)
	The appearance of [WEBSITE].com	Data	Charts	(Pie	Bar	Line)
	The product selection of [WEBSITE].com	Data	Charts	(Pie	Bar	Line)
	The site search capability at [WEBSITE].com	Data	Charts	(Pie	Bar	Line)
2	Question Randomizer					
3	For whom do you primarily shop for online?	Data	Charts	(Pie	Bar	Line)

Then view the analysis data! It is as simple as that!

Data Results for [Online Bookstore Survey]

Frequency Analysis | Grouping

Frequency Distribution Analysis

How many online purchases have you made in the last month?

#	Answer	Frequency	Percentage	Mean Calc. ❓
1	None	1	50.00%	☑
2	1-4	0	0.00%	☑
3	5-10	1	50.00%	☑
4	11-15	0	0.00%	☑
5	16+	0	0.00%	☑
	Total	2	100%	

Update ❓

Mean : 2.000
Mean Percentile : 80.00% ❓
Standard Deviation : 1.414

Close

This is the **First** level for your analysis. This gives you an "overall" impression of what your respondents are thinking. In the subsequent sections we'll do some data-mining and in-depth analysis.

II. Cross Tabulation Analysis (Banner Tables)

Cross Tabulation Analysis (Crosstabs) give you more insights into your data. Crosstabs answer questions like: -

- What % of males made a purchase within the last 2 months?
- Are males more satisfied with our products than females?

It basically involves the interaction between **two questions** and a distribution of how users responded to both of them -- taken together.

Cross-Tabs

Choose the two questions you'd like analysis done...

Note
Please Note : **Subgroup Criteria** is not available with CrossTabulation currently.
Only Simple CrossTabulation is active.

First Variable   1. The ease of use o

Second Variable   [SKIP]. How many online purc ...

[SKIP]. How many online purc ...
1. The ease of use o
1. The appearance of
1. The product selec
1. The site search c
1. Question Randomiz
2. For whom do you p
3. What is your most
4. When you purchase on ...
5. What are the top

View the data!

Cross Tabulation Frequency/Percent	0. For whom do you primarily shop for online?						
		Yourself	Family members	Friends	Business	Other	Row To
[SKIP]. How many online purc ...	None	0	3	0	0	0	3
		0%	100%	0%	0%	0%	37.5%
	1-4	0	2	0	0	0	2
		0%	100%	0%	0%	0%	25%
	5-10	0	1	0	0	0	1
		0%	100%	0%	0%	0%	12.5%
	11-15	0	0	0	0	0	0
		0%	0%	0%	0%	0%	0%
	16+	0	0	0	0	2	2
		0%	0%	0%	0%	100%	25%
	Column Total	0	6	0	0	2	8
	Column Percent	0%	75%	0%	0%	25%	100%

Pearson's Chi-Square Statistics

Total Chi-Square	8.0
p Value	0.949
Degrees of Freedom	16

III. Grouping and Segmentation Analysis

Grouping analysis is probably the most interactive tools to "delve" into your data. You can create custom groups or filters. For example: -

- Gender = Males AND Purchase=Last 10 days
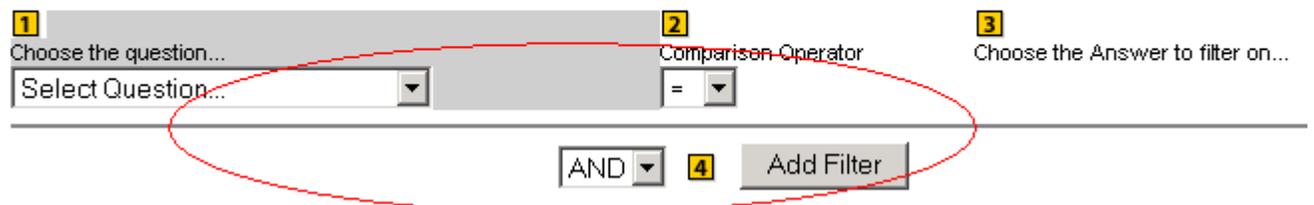- Gender = Males AND SATISFACTION > 5

To access grouping analysis, click in View Results->Grouping Analysis
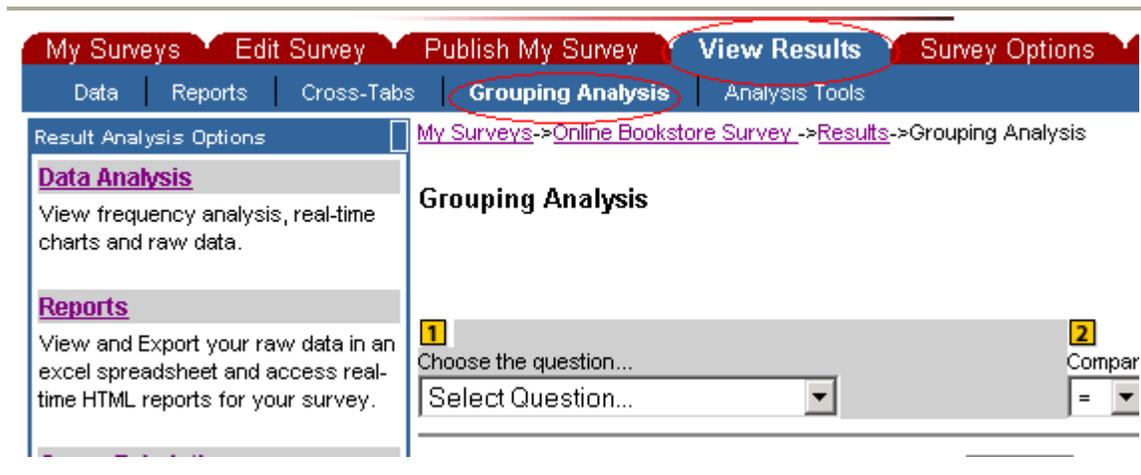
Create your groups and filters...

After creating the "Filters" or "Groups" you can click on all the Data Analysis links and view the frequency data filtered by the groups that you just created!

#	Answer	Base		Product Selection	
1	None	2	40.00%	0	0.00%
2	1-4	1	20.00%	1	100.00%
3	5-10	1	20.00%	0	0.00%
4	11-15	0	0.00%	0	0.00%
5	16+	1	20.00%	0	0.00%
	Total	5	100%	1	
	Mean	2.400		2.000	
	Standard Dev.	1.673		0.000	

Enjoy slicing and dicing your data!

Key Facts
- **Frequency analysis give you the overall picture**
- **Grouping and Segmentation allows you to compare between segments**

T.U.R.F Analysis - Total Unduplicated Reach and Frequency Analysis

TURF is a statistical model that can used to answer questions like:

- Where should we place ads to reach the widest possible audience?
- What kind of market-share will we gain if we add a new line to our model?

It was originally devised for analysis of media campaigns, and has been expanded to apply to product, line and distribution analysis.

With QuestionPro any MULTIPLE CHOICE (Multiple Answer) question can be analyzed using TURF. The TURF Simulator can give you One-Click access to **Optimal** configurations for maximizing reach. **Reach** or **Coverage** is defined as the proportion of the audience (target group) that chooses a particular option.

Real Life Example Scenario:
QuestionPro conducts surveys on a regular basis to find out what kind of information our users are looking for with they initially come to our site. One of the questions in a Popup Survey is the following :-
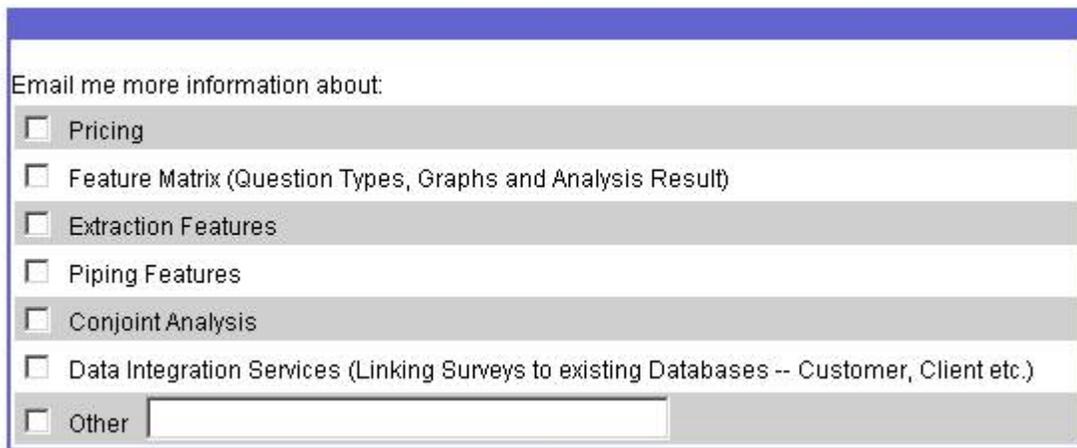
Email me more information about:

☐ Pricing

☐ Feature Matrix (Question Types, Graphs and Analysis Result)

☐ Extraction Features

☐ Piping Features

☐ Conjoint Analysis

☐ Data Integration Services (Linking Surveys to existing Databases -- Customer, Client etc.)

☐ Other

What we want to know is what **Three** choices among these **Seven** choices will give us the most reach? A **Simple Frequency Analysis** gives us the following results :-

Data Analysis			
Email me more information about:			
# Answer	Frequency	Percentage	**Mean Calc.**
1 Pricing	167	29.61%	☑
2 Feature Matrix (Question Types, Graphs and Analysis Result)	121	21.45%	☑
3 Extraction Features	74	13.12%	☑
4 Piping Features	51	9.04%	☑
5 Conjoint Analysis	57	10.11%	☑
6 Data Integration Services (Linking Surveys to existing Databases -- Customer, Client etc.)	72	12.77%	☑
7 Other	22	3.90%	☑

Please note that the simple frequency does not give us any particularly interesting data. Here we note that <u>Pricing</u>, <u>Feature Matrix</u> and <u>Extraction Features</u> are the three most important pieces of information that people want.

Is this really the right answer though? Probably not because we have not taken into consideration that the same people who requested <u>Feature Matrix</u> might have requested <u>Extraction Features</u> also!

We need to eliminate the duplicates and to find out the "Reach" of any three of the elements to effectively come to a conclusion.
With the TURF analyzer and Simulator from QuestionPro we find the exact reach for any number of the options: -

Analysis | **Simulator**

Answer

☑ Pricing

☑ Feature Matrix (Question Types, Graphs and Analysis Result)

☐ Extraction Features

☑ Piping Features

☐ Conjoint Analysis

☐ Data Integration Services (Linking Surveys to existing Databases -- Customer, Client etc.)

☐ Other

Total Recorded Responses : 228
Reach Count : 198   Market Share (Reach %) : 86.84%

[Calculate Unduplicated Reach]

This shows that <u>Pricing</u>, <u>Feature Matrix</u> and <u>Piping Features</u> give us a Reach of 87%. This is good, but we also want to find out what three options give the the maximum reach. We use the TURF Simulator for this.

You can use the TURF Simulator to find the "Optimal" three choices that gives you the MAXIMUM Unduplicated Reach.

The TURF Simulator runs through every possible configuration of three choices at a time and gives you a sorted order of "Reach %".

Here we find out that Pricing, Feature Matrix and either Other or Data Integration Services will give us about 90% reach!
It is also worthy to note that our simple frequency analysis yielded a different result.

Key Facts
- **Use the TURF analysis module on any MULTIPLE CHOICE question (Multiple Answer)**
- **TURF Analysis allows you to find out "Reach"**

Trend Analysis - Analyzing aggregate response data over time

"With the past, we can see trajectories into the future - both catastrophic and creative projections."
John Ralston Saul

The Trend Analysis module allows you to plot aggregated response data over time. This is especially valuable, if you are conducting a long running survey and would like to measure differences in perception and responses over time.

The following data points can be measured (Y-Axis)

1. Mean and Mean Percentile
2. Standard Deviation and Variance

The "Time Factor" (X-Axis) can have the following granularity

1. Daily
2. Weekly
3. Monthly
4. Quarterly (Jan-Mar, Apr-Jun, Jul-Sept, Oct-Dec)
5. Yearly

Trend Analysis can be extremely valuable as an early warning indicator of potential problems and issues with product line and service level changes that impact customers. If you see a dip in the "mean" for a Continuous Variable satisfaction question after a particular "marketing event" you can immediately start investigating the dip and explore causes of the decrease in satisfaction levels. It can also be used to gauge response rates over time.

Marketing events can be anything from product or service enhancements and upgrades to general communications to your customers. A good example is a "website usability upgrade" - many organizations go to great lengths to make their website more usable, but fail to asses impacts before and after the upgrades. A "Customer Pulse" survey that asks visitors to rate the website on a 7pt scale should have a mean that is flat before the upgrade. After the upgrade, Trend Analysis can reveal the "jump" or "decline" in satisfaction levels of your customers. This can also be used to simulate, by using focus groups or a representative sample, the potential increase or decrease in satisfaction levels. This data can be further used for various cost/benefit analyses.

Trend Analysis can only be performed on "Quantitative" question types like Multiple Choice, Rank order and Constant Sum. Questions that have textual input (Qualitative) cannot be used for trend analysis.

The Trend Analysis data can be accessed real time by going to the "Trend Analysis" section in the "View Results" tab. Load up the question you would like to perform the analysis on and choose the "Frequency" or the "Time Factor" you would like the analysis on. The output would be real-time graphs as well as the data set for the graphs in a CSV format for you to cut and paste into Excel.

Example Illustration:

As part of our effort to collect and present relevant information to users who browse our site,

QuestionPro has a "Popup Survey" that asks a few questions about the users who visit the website. One such question is: -

Approximately how many <u>completed</u> responses do you need? *

- ○ < 200
- ○ 200-750
- ○ 750-1500
- ○ 1500-3000
- ○ 3000-10000
- ○ >10000

Now, basic frequency analysis gives us information about the "mean" responses that most of our users are looking for. But what we want is to analyze how that mean changes and varies over time. We use the Trend Analysis module for this. The following figure gives us information about how the mean varied over time.

Date	Total	Mean	Mean Percentile
Oct 2002	10	2.800	70.00%
Nov 2002	16	1.875	85.42%
Dec 2002	6	1.333	94.44%
Jan 2003	24	1.958	84.03%
Feb 2003	76	1.961	83.99%
Mar 2003	69	2.000	83.33%
Apr 2003	83	1.928	84.54%
May 2003	105	1.924	84.60%
Jun 2003	99	1.646	89.23%
Jul 2003	77	2.000	83.33%

From here we can find out that the mean remained consistent between January and June except for in June where it moved down to - (1.65) whereas otherwise it was between 1.9 and 2.0 for the other months. This merits some investigation into why the mean changed in June! We investigated this "dip" further and co-related it to a "Marketing Event" - Our advertisements, on Search Engine Sites like Google and Yahoo, were not running at their optimized settings in June!

Pro-Active data analysis can help your organization be "in touch" with your customers and business partners. Trend Analysis provides you with an easy mechanism to monitor the aggregate response data filtering out the noise, for you to make informed decisions.

Key Facts
• **Trend Analysis helps your track your score over time**
• **Use it in conjunction with marketing events to track success**

Conjoint Analysis -- Self Explicated and Discrete Choice Models (Full Profile)

What is Conjoint Analysis?
Conjoint Analysis is model and technique used to assess the different weights individuals place on the variables presented to them in a given purchase situation. For example, if a consumer decides to buy a house there are a couple of distinct variables involved: -

- Purchase Price
- Size (Sq. Feet)
- Quality of Bathrooms/Kitchens
- Proximity to Schools

A conjoint study usually involves showing respondents product profiles and asking them to indicate (in a variety of ways) how much they like or prefer these alternative product profiles. Statistics are then used to work out the contribution that each product attribute is making to the overall likeability.

What are the different types of conjoint analysis models?
There are primarily three distinct variations of the models:-

1. **Self-Explicated Model** - In this model, the respondents are asked "direct" questions about the desireablity of a particular list of products and profiles.
2. **Discrete Choice** - Here respondents are asked to choose between multiple products and the relative weights for each of the attributes are calculated indirectly.
3. **Ratings Based Conjoint** - Here respondents are asked to "Rate" the likelyhood of purchase for two products at a time.

What does QuestionPro offer in terms of the different models?
At this time, QuestionPro supports all three modeles: The Self-Explicated, Discrete Choice and Ratings based models.

What about Analysis tools and Reports?
The following toolsets are available for all the conjoint models: -

- Raw data of the data with the calcualted utilities
- Relative Importance of Attributes and Levels
- Market Segmentation and Utility Simulator

Key Facts
- **Conjoint analysis is a model – not a statistical analysis tool**
- **Use Conjoint to measure price sensitivity, brand equity etc.**

Discrete Choice Conjoint Analysis

Introduction
Conjoint Analysis is one of the most effective models in extracting consumer behavior into an empirical or quantitative measurement. It evaluates products/services in a way no other method can. Traditional ratings surveys and analysis do not have the ability to place the "importance" or "value" on the different attributes, a particular product or service is composed of. Conjoint Analysis guides the end user into extrapolating his or her preference to a quantitative measurement.

One of the most important strengths of Conjoint Analysis is the ability to develop market simulation models that can predict consumer behavior to product changes. With Conjoint Analysis, changes in markets or products can be incorporated into the simulation, to predict how consumers would react to changes.

Attributes and Levels

Any product or service can be modeled as an entity with a set of attributes. For example an airline ticket between Seattle and Miami may have the following attributes:-

1. Price
2. Brand (Airline)
3. Miles Gained
4. Seating
5. Flight Stops

Another example is a credit card: -

1. Brand
2. Interest Rate
3. Annual Fee
4. Credit Limit

Each of the attributes may have one or more levels. A level can be defined as any value the attribute can take. In the examples above, the attributes can have the following levels: -

1. Price
    o   150$
    o   200$
    o   400$
    o   500$
2. Brand
    o   Delta
    o   AA
    o   Alaska Airlines
    o   Northwest
3. Miles Gained
    o   None
    o   4000
    o   4000 + 2000 Bonus
    o   4000 + 4000 Bonus
4. Seating
    o   Normal

  o   Extra Leg Room
5. Flight Stops
  o   None
  o   1
  o   2

It is also assumed that each of the levels is mutually exclusive. If you cannot define levels that are mutually excusive, then you would need to combine levels and redefine them so that they are. The levels should also have concrete and unambiguous meanings. For example - "Very Expensive" vs. "Cost of $500"

The Number of Levels Effect: -

Holding all else constant, attributes defined on more levels than others will be biased upwards in importance. For example, price defined as ($100, $200, $300, $400, $500) will receive higher relative importance than when defined as ($100, $250, $500) even though the same price range was measured. This hold true for quantitative (Price, Speed etc.) as well as categorical (Brand, Color etc.)

The above 5 attributes and 16 levels can be defined as the competitive market for airline flights between Seattle and Miami. If you can define a market using this model, you can use conjoint analysis for consumer behavior and preference.

Choice Based Conjoint
Choice based or Discrete Choice Conjoint is by far the most preferred model for a conjoint questionnaire. This is primarily because it models after consumer behavior in real-life. Most purchases that consumers make today are basically trade-off based. Will you buy a $150 ticket with 2 flight stops and No miles or a 200$ ticket with no stops and 4000 miles?

Preparing for the Online Questionnaire
Here are some simple steps to assimilate the information before beginning your online conjoint survey.

1. **Attributes:** Define the attributes for your market segment. For most studies, try to keep the number of attributes below five. If you have a large number of attributes, try aggregating and combining these attributes into meaningful composite attributes.
2. **Levels:** Define at least two levels for each of the attributes. Try to stick to a maximum of four or five levels per attribute.
3. **Minimal Respondent Base:** Try to figure out if your respondent base is homogeneous. Are you interested in interaction of the conjoint data between different demographics? For example are you trying to figure out if Males place a higher value for miles than females in buying an airline ticket? In such a case your Minimal Respondent Base is Â½ of all the participants (assuming equal distribution of males and females.)
4. **Minimal Choice Count for statistical validity:** Try to come up with a minimum number of times a Level should be shown to the respondents to make a statistically valid sampling. For most conjoint studies a Minimal Choice Count of 100 to 150 should give good results. What this number represents is that, all attribute levels should be presented at least 100 to 150 times to make the results of the study statistically significant.

You do not need to come up with both the Minimal Respondent Base and Minimal Choice Count. If you have one, the Concept Simulator can determine the other. More details about the Concept Simulator are provided below.

Creating the Conjoint Survey
All you need to create the conjoint survey are the Levels and Attributes. They are the minimal data-points required to create a conjoint survey.

1. Login to QuestionPro with your username and password
2. Create a new survey or edit a survey that you have already created.
3. My Surveys » Edit Survey » Advanced Questions
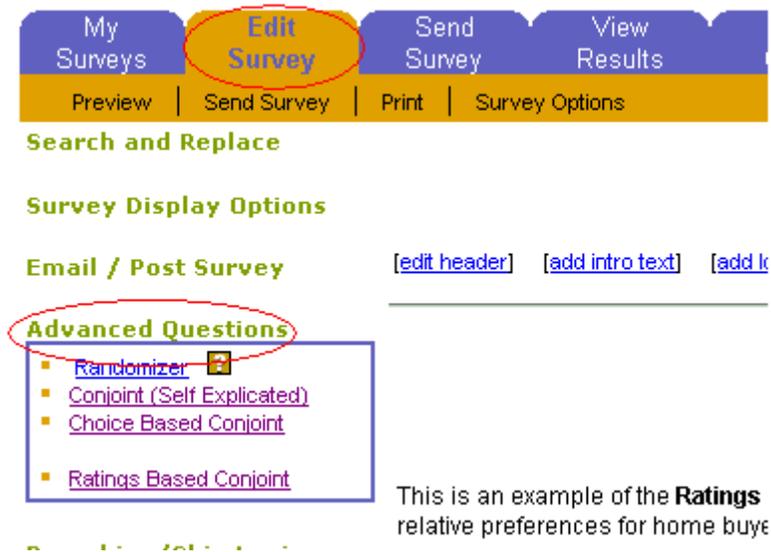
4. This should open up a window for the Conjoint Question Wizard. Type in the Attributes (One per line)

Step 1 of 2

Feature Selection

Enter the name of each feature (Factor) to be evaluated -- Enter each name on a new line. Ex: -

Price
Color
Size

```
Price
Brand(Airline)
Miles
Seating
Flight Stops
```

Task Count 4 ▼ ?

Concepts Per Task 2 ▼ ?

☐ Allow for "No Applicable Choice" Option

Text for "No Applicable Choice"

```
None
```

Orientation Vertical ▼

Next Step >>

5. In the next step, type in the Levels for each of the attributes and Save the Conjoint Question. You will be asked to enter in the levels for each of the attributes defined in the previous stop. You can click on the online help icons anytime to get more detailed information about features and options.
6. Once you are done, a Conjoint Question is added to your survey! You can click on the "Preview/Test Survey" button to take the conjoint survey.
7. The "Setup" link gives you access to additional tools and configurations for the Conjoint question. At a minimum the following tools are available: -
   o Concept Simulator
   o Price Table
   o Prohibited Pairs

Customizing the Conjoint Survey

The behavior of the Conjoint Engine can be customized by clicking on the "setup" link on a conjoint question. The Conjoint Setup gives you a host of options and tools. One of the most important ones is the Concept Simulator.

1. **Concept Simulator**

   The Concept Simulator is basically a respondent Simulator. This can be used to determine what choices will be presented to the respondents when your survey is actually deployed. You can use this information to determine either the number of respondents you need to send the survey out to, or the Minimal Choice Count.
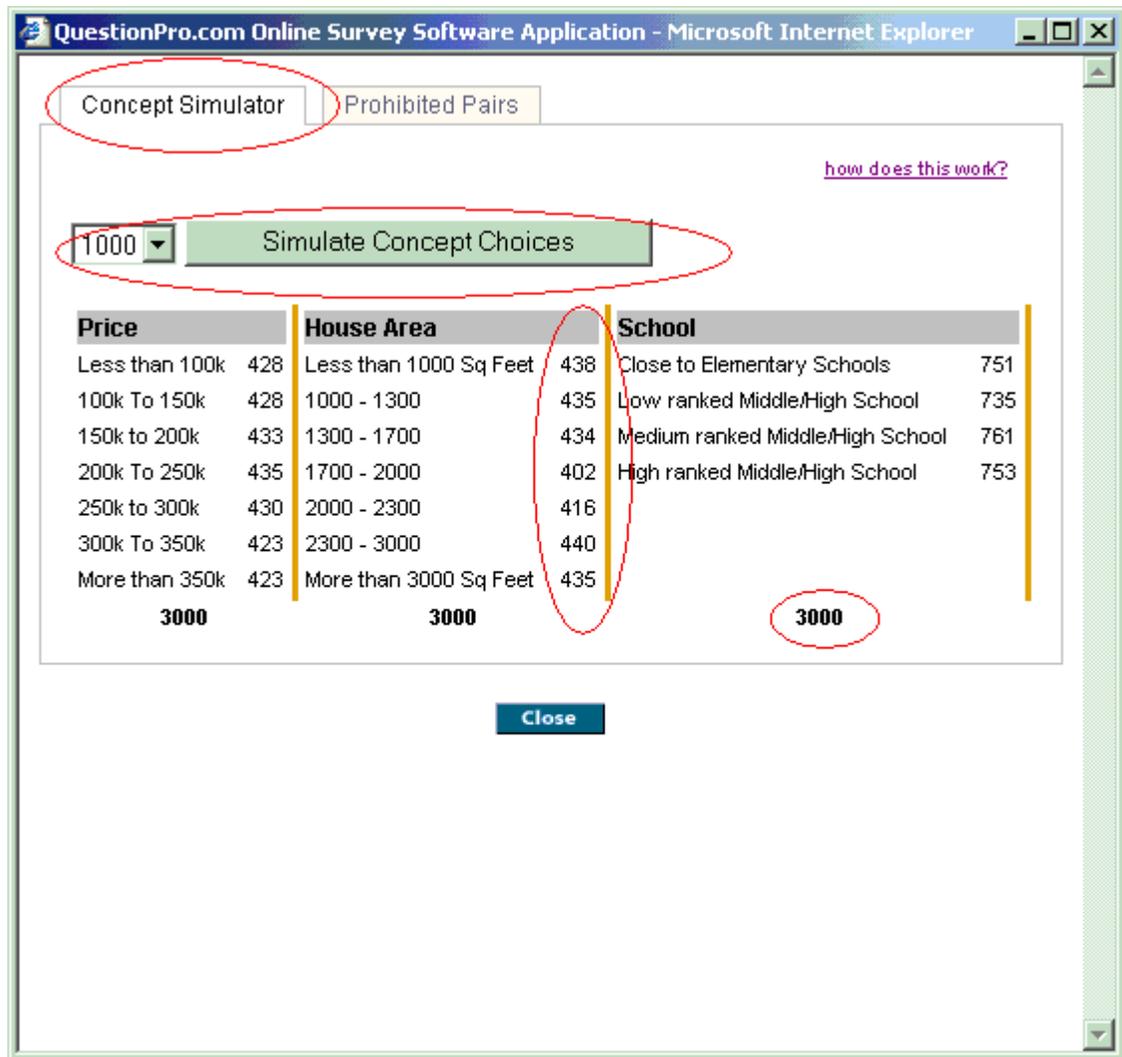
   The Concept Simulator can be run by clicking on the "Setup" Link on your conjoint question and then choosing the number of users you want to simulate the different concepts: -

The Concept Simulation above simulates 1000 respondents. In the conjoint definition we setup this as 4 concepts / task we see that the total for any feature is 4000. The Display Count for each of the levels in all the attributes is shown. Running the Concept Simulator multiple times will yield different random results. This is by definition and design since we are using the "Random" Concept Choosing Mechanism.

If you already know the number of respondents that will be taking the survey, then choose a simulation count closest to that and run the simulation. The Display Count for each of the Level will be displayed after the Simulation. This number should be more than your Minimal Choice Count. If that is not the case, then you can do one of the three things: -

1. Increase the number of respondents
2. Increase the Number Of Tasks per respondent. Please bear in mind that if the number of tasks is too high, then the probability of "Drop Outs" increases significantly

3. Increase the Concepts Per Task value. Again, this increases the stress on the respondent, because now he will have to choose between more products

If you are trying to determine the number of respondents, then start off with the least number and simulate the Display Count. Keep increasing the simulation count till you reach an acceptable Display Count that is more than the Minimal Choice Count. This is the approximate number of respondents that you need to recruit for to satisfy the Minimal Choice Count.

2. **Price Table Configuration**
    Price Tables are useful if your market is fairly broad and that certain Levels of certain attributes are constrained by an upper and lower limit on the price. This is mainly used for "lower" limits only, but functionality for upper limit is also provided. For example, in our case there might be absolute financial constraint for the Attribute "Seating" and Level "Extra Leg Room" the minimum cost is $300. It basically makes the choices more realistic, because the respondent will never see a concept which includes a price of $150 or $200 and "Extra Leg Room".
3. **Prohibited Pairs** If there are special "Business Rules" in defining concepts such that a particular Level can never appear with another level as part of the same concept, you can create those prohibited pairs here.
    For example, if we know for sure that American Airlines never gives out Bonus Miles, then we can create two prohibited Pairs: -
    1. AA & 4000 + 2000 Bonus
    2. AA & 4000 + 4000 Bonus

This will make sure that the Conjoint Engine never shows the respondent a concept that includes AA and bonus miles.

Again, this makes choices more realistic. However bear in mind that you conclusions and market simulations are based on the fact that AA will NEVER issue Bonus Miles (Even in the future)
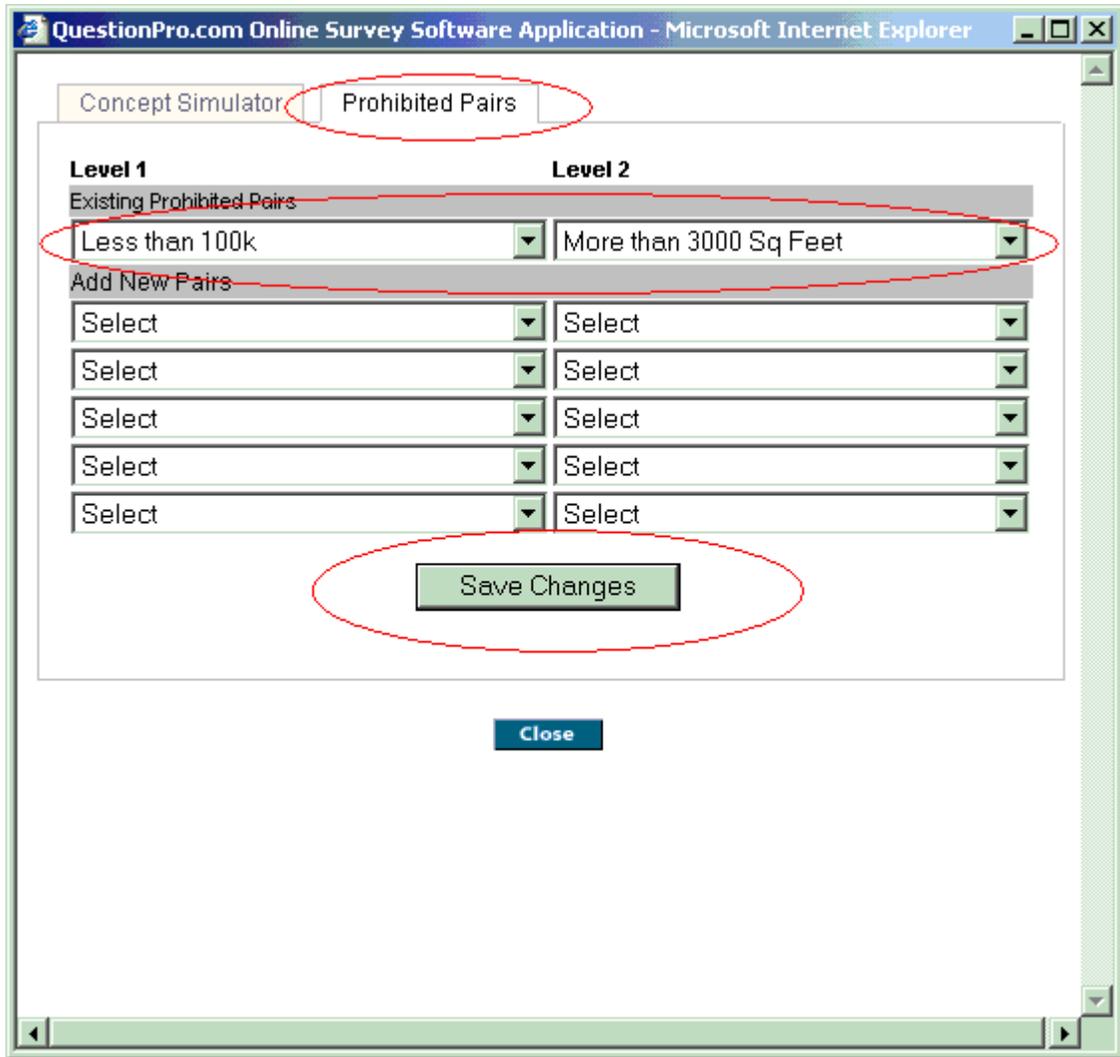
Distributing the Survey
For all practical purposes, conjoint surveys are the same as other traditional surveys that are developed using the survey engine. Please follow one of the methods of distribution in the "Distribute" tab.

More information about distributing surveys can be found here: - Click here for help on sending out your survey

Analysis of Choice Data
Once data-collection is completed or at anytime during data-collection you can download a comprehensive Excel Report of the Choice Data that has been collected so far - Choice Data Report.
My Surveys » (Select Survey) » View Results » Advanced Analysis Tools » Conjoint Analysis

At a minimum the Choice Data Report will have the following: -

1. **Raw Data of the Choices made by the respondents**
    This is the basic raw data as QuestionPro received it. This can be used with other
    statistical packages like SPSS etc. for additional analysis.
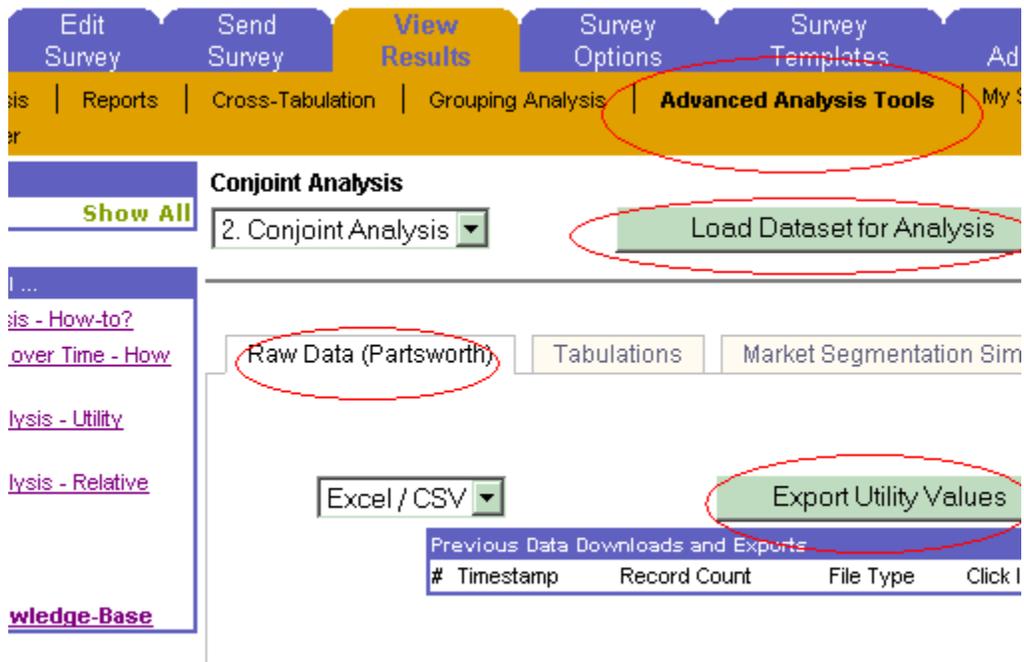
2. **Attribute Cross Tabulation of Counts**
    Every Attribute in the Conjoint Question will be Cross-Tabulated with the remaining
    attributes. This data can be used to analyze price sensitivity brand interaction.
3. **Table of Relative Importance of the Attributes and Average Utilities**
    The Average Utilities give you a rough estimate of how important each of the levels is in a
    purchase decision. From the average utilities, a "Range" for each attribute is also
    calculated and displayed as well as the Relative Importance or Impact on purchase
    decision.

Market Share and Product Definition Simulator

The Conjoint Simulator is by far the most interesting aspect of Conjoint Analysis. This gives you the ability to "predict" the market share of new products and concepts that may not exist today. This also gives you the ability to measure the "Gain" or "Loss" in market share based on changes to existing products in the given market.

The first step in Conjoint Simulation is identifying and describing the different products or concepts that you want to investigate. We call these "Profiles". As mentioned earlier, any product or concept can be identified or created using the Attributes and Levels that have been defined for the study. For the purposes of the Conjoint Simulator, a product or concept comprises of all the Attributes and one level from each of the attributes.

For example one of the profiles could be: -
$500, Alaska Airlines, 4000 + 4000 Bonus, Normal Seating, No Flight Stops

In most cases we would want to find out all the existing products that are available in that market segment and simulate the market share of the products to establish a baseline. Once this is established, it would be a good starting point for trying out new services and ideas and see how the market share shifts based on new products and configurations.

Conjoint Choice simulation can be done using a couple of different models. At the least the following models will be available: -

First Choice Model

The First choice model identifies the product with the highest utility as the product of choice. Here is how the First Choice Model works: -

1. The Utilities for each of the respondent is calculated
2. For each Profile in the simulation, the respondents Utility towards that particular Profile are calculated.
3. The Profile with the highest utility is chosen as a "Vote" to that profile by that respondent. If there is a tie between multiple profiles, then the vote is distributed across the profiles. For example if Profile 1 and Profile 2 have the same utility value for a particular respondent, then a vote of .5 is given to each of the profiles.
4. When this is done for all the respondents, the Market Share for each of the profiles is calculated - this is the percentage of votes that a profile got compared to all the votes.
5. The Total Utility as well as the Mean Utility for all the profiles across all the respondents is displayed.

Current Valid Profiles

Profile - 1 ↳ 400$ ↳ Delta ↳ None ↳ Normal ↳ 1

Profile - 2 ↳ 150$ ↳ Delta ↳ 4000 + 2000 Bonus ↳ Normal ↳ None

Profile - 3 ↳ 200$ ↳ Delta ↳ None ↳ Normal ↳ None

Profile - 4 ↳ 200$ ↳ Delta ↳ 4000 + 4000 Bonus ↳ Extra Leg Room ↳ None

Run Simulator

Simulation Output :
Response Count : 5

Profile	Vote Count	Market Share	Total Utility	Mean
Profile - 1	1.0	20%	7.2364583	1.4472916
Profile - 2	1.0	20%	6.008894	1.2017788
Profile - 3	0.0	0%	6.8017516	1.3603504
Profile - 4	3.0	60%	7.626754	1.5253508

Tabulation Data :

Response ID	Profile - 1	Profile - 2	Profile - 3	Profile - 4
102	1.5238096	0.7619048	1.2190477	1.9636364
116	1.3309524	0.9976191	1.3309524	1.4944445
115	0.752331	1.2188145	1.3831003	1.5703297
114	1.7126985	0.90555555	0.8984127	0.81858176
82	1.9166666	2.125	1.9702381	1.7797619

The simulation above shows the following: -

1. 5 Respondents took the survey
2. Profile 4 got the most votes - 3
3. Profiles 2 and 3 got the same number of votes; however the Mean Utility for Profile 1 is higher than Profile 2.

You can change/add more profiles and see how the market share is affected by adding and changing profiles and experiment with new ideas.

The goal of any conjoint survey is to assign specific values to the range of options buyers consider when making a purchase decision. Armed with this knowledge, marketers can focus on the most important features of products or services and design messages most likely to strike a cord with target buyers.

Key Facts
- **Discrete Choice Conjoint make users choose between hypothetical concepts**
- **Calculated utilities are relative values – not absolute**

Using Surveys for Online Market Research

So far we've discussed online data collection primarily in the context of customer interaction studies. Online data collection can also be extended to do global brand tracking studies as well as studies for brand awareness and price sensitivity. Generalized data collection is no different than sending out a survey to all your customers. The only real difference is the sample (survey respondent) selection. In a consumer market research study, respondents are usually selected at random from the general population. There are a variety of vendors that provide access to survey panels – users who have opted in to complete and take surveys. Using survey panels can be an easy and effective way to get your survey completed by a large population.

Outsourced Survey Panels

Once you have created your market research survey, the next step is obtaining a survey panel or email list of respondents to complete the survey. The key to these lists is ensuring that the email respondents have "opted in" to receiving invitations to surveys. Opt-in email lists are the only way to ensure that the email distribution is not considered unsolicited commercial email (UCE), or spam. Internet users can opt to receive these survey invitations in a number of ways, ranging from subscriptions to newsletters to actually volunteering to be part of an online survey panel in exchange for contests prizes and giveaways. Survey Sampling (SSI), GMI-MR and Greenfield Online are a few well-known survey panel providers available online.

Pricing for the opt-in survey panel is based on the number of completes that meets the requirements for the research. One completed survey will cost anywhere in the range of $2 - $20 depending on the uniqueness of the target sample. Typically the distribution will need to include an incentive for completing the survey. The incentive can be offered to every respondent, or the first 100 respondents, or 1 out of every 25 respondents for example. Some survey panel companies will also charge based on the duration of the survey. When considering the incentive, survey duration and complexity will have to be considered to ensure that the respondents are motivated to complete the entire survey.

You may also consider balancing the sample by publishing the survey invitation on internet newsgroups, Weblogs, and press releases. These methods are equally as effective and lower cost ways to invite respondents to take the survey. Many internet content sites will readily include a survey invitation in exchange for sharing research results.

A sample study may call for 100 married females aged 26-40 and 50 single males aged 26-40 who are the primary shoppers for their households. Demographic questions, including marital status and age, would be presented to the respondents until a count of 100 females and 50 males have met the criteria. Any respondent who does not meet the criteria for the study is automatically routed to the end of the survey. Any respondent who meets all of the demographic filtering questions are presented with the actual research questions.

Key Facts
- **Use external panel providers to conduct research if you do not have a list of users**
- **Price range is usually between $2 – $30 per completed survey**

Building and Managing your own Online Panel

Sometimes we cannot rely on the quality of survey respondents from external vendors or it makes strategic sense for companies to build out their own panel of respondents for market research studies. In cases where your customers are considered niche, it makes sense to invest the time and effort in building out your own online panel of respondents.

Due to advances in technology and a competitive marketplace, the job of building out a panel has become easy and streamlined. Just as companies have already figured out a way to provide a point-and-click interface to develop a survey, you can also build out an online panel portal using your web browser and start collecting members interested in taking surveys.

Building out your own panel is definitely more time consuming and difficult than simply engaging an outsourced panel provider, but the rewards are also significant. The quality of the respondents is generally higher in self-recruited panels. The long term costs of such initiatives usually much cheaper than engaging external vendors for all your market research initiatives.

Our experience has shown another side-effect to developing your own panel – executives tend to trust the data generated by self-recruited panels much more than outsourced panels. The general perception is that self-recruited panels represent your customer base more accurately than outsourced panels.

Key Facts
- **Develop your own panel if you plan on conducting a large number of marketing studies**
- **Use a software solution (platform) to develop your own panel**

Conclusion

The goal of any research exercise is to come up with actionable data. Simply put, conducting regular surveys and coming up with an executive summary for collected data will make the exercise a success. While there are tools and solutions available to make this easier, it is still incumbent upon you, with the knowledge and background of your particular business domain, to make sure that the right questions are asked and the interpretation of the results is done correctly.

I hope this handbook provided you with the necessary background and information to start and enhance your online research. I would love to hear what you think about the information presented here (Yes – An online survey) – Please click on the link below to give me some quick feedback. It's a simple two question survey!

http://www.questionpro.com/akira/TakeSurvey?id=1234

About Survey Analytics

Let's try and cut through the marketing fluff and give you a quick idea about who we are:

- Survey Analytics is a technology company focused on developing software solutions for online data-collection and analysis
- Headquartered in Seattle, WA with satellite offices in Nasik, India and Auckland, New Zealand
- Owns and operates online internet sites like questionpro.com, qsample.com, surveyconsole.com, researchaccess.net etc.

Additional References

1. How surveys influence customers -- Harvard Business Review –
   http://www.informative.com/news/newsArticles/HBRArticle.pdf

2. Surveying Students for Continuous Improvement --
   http://www.pbs.org/als/agenda/articles/survey.html

3. The importance of measuring importance – Correctly –
   http://www.greatbrook.com/trade_off_analysis.htm