

GARTNER MARKET RESEARCH PRIMER

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I. INTRODUCTION

Why a primer?

While the use of market research continues to grow, there are still two camps regarding the value of research. Some critical comments we've heard include:

"Market research is a mystery to most, a bore to some and a bane to others."

"...the first to go when budgets are cut."

"A threat to the agency's creative freedom."

"Only tells you what you already know."

"Wastes time and money to put a report on the shelf. We're going to go ahead anyway regardless of what the research says."

"It doesn't work for genuinely new or creative ideas."

But, on the other hand, the advocates have said:

"We'd have never been able to create this winning product line without the research."

"Market research saved us from a \$5 million mistake."

"The research helped our ads gain the highest read and noted scores this magazine has ever seen."

"We've been able to use the research to focus and track our turnaround."

"...our secret weapon."

"The research projected our first year's sales within a hundred units of actual shipments."

After more than 20 years of learning, doing and explaining market research, we felt a thumbnail sketch of basics might help people access the value quicker, easier and more often. This primer introduces the lingo, the mindset and the goals of quality market research.

We intend to fulfill both of Webster's definitions of a primer: "A textbook that gives the first principles of any subject. Also, a work of elementary religious instruction."

Whether you are a doubter or a zealot, the *Gartner Market Research Primer* is a handy reference for market research methods, terms, processes and cautions.

This is the updated PDF version of our acclaimed *Plotting the Way* primer, created for downloading from the Web. We also have the original hardbound version with all the pretty pictures. Call us if you would like a copy.

Best regards,

The Gartner Custom Research Team

Why do research?

There are several issues to think about before doing research. These are spelled out in a later section called “What to ask before you start.” However, before you can effectively conduct a research project, you need to have a clear understanding of what you are trying to accomplish. You will need to set specific objectives. As a starting point, there are three common and rather straightforward reasons why any organization should consider custom primary market research:

To improve your business results, discover opportunities and expose risks.

Four true success stories.

Following are brief summaries of how four companies have realized a return on their research investment. All are real, true stories (maybe a little editorial license). For confidentiality, names and details are altered.

Revitalizing an old market.

Situation: A firm manufacturing a type of instrument sold to engineers and technicians was awash in choices—probably more models and product families than it would ever need. The market was dominated by two strong players that were well-entrenched and respected.

Precision Measurement was a second-tier player barely able to squeeze out any profits. The key question was, “How do we make money in this old, stable and saturated market?”

Research: Most markets can be segmented or broken down into clusters of needs. Using a combination of sophisticated segmentation techniques, this instrument market was pried apart to reveal two clusters of users who were being overlooked by the large vendors focusing on the high-volume, general purpose end of the business. Not only were these segments’ specific product needs identified, but one audience was also found to be willing to pay a premium for a more specialized solution.

Results: Product development focused on these niche needs. While volumes are lower than in other parts of the market, the higher value placed on well-targeted instruments has created a successful and highly profitable business for Precision. Instead of banging heads with the entrenched leaders, Precision has established a strong and defensible position with two separate, loyal segments of the market.

Hitting the communications target.

Situation: ZRS was ready to launch its new family of microprocessors. These ICs were seen as an important new generation, but everyone had a different idea of how to introduce them. There were at least three camps within ZRS—each with its own strong opinion. And the ad agency had its own, different approach. What would work?

Research: Target customers for the new chips were shown a set of concepts that addressed each idea. One was so powerful that a designer described it as drawing his attention “like the fins on a ‘57 Chevy.” Another generated automatic skepticism and lacked credibility. This feedback defined a clear set of parameters for the introduction.

Results: Introductory ads were developed based on the research. The new marketing campaign generated record awareness and sales for ZRS.

Fixing a fatal flaw.

Situation: Soft Solutions prided itself on its home-office-oriented product's technical superiority. The problem was that most of its customers were not technically inclined. The dry, institutional packaging didn't cut it and the marketing copy made the developers feel great but did not speak to the buyer. The result was less than stellar performance against technically inferior competitors.

Research: Home computer users were questioned at length about their images of competing brands. One element that emerged was the growing impact of packaging on the brand's image—particularly to younger shoppers who cruise the store shelves. While many had read that Soft Solutions' programs were superior, the packaging was seen as old-fashioned and second rate—and definitely out of step with a premium price.

Several versions of new packaging were developed and reviewed by shoppers. An approach was found that fit Soft Solutions' market image—not second rate, and clearly conveying the best “buy messages.”

Results: Sales took off. The brand achieved its potential as the leader in its niche.

A complete program succeeds.

Situation: Hillside Computers had run out of ideas. Its old product was in decline and a new approach was badly needed—so badly that the parent company was threatening budget cuts and layoffs.

Research: While the need was urgent, rather than go for a quick fix, Hillside made the effort to develop a well-orchestrated, integrated research plan. Within the plan, exploratory research was used to understand the market's underlying trends and future needs. Large-scale surveys were launched to size and characterize these new product needs. Then, product ideas were tested and refined. Market simulations (more later on this technique) were conducted and advertising positions investigated. Finally, a series of tracking studies were used to diagnose and fine-tune the product's launch and life cycle.

Results: The research found, refined, projected, positioned and tracked a whole new family of successful computers. The research actually accelerated product development. The company's CEO ended up on the cover of *Time*, and new production facilities had to be built to keep up with demand. This new type of computer continues to gain market share while producing a healthy profit. "All impossible without the research."

What do we mean by “market research”? Two fundamental divisions.

While there are many ways to slice the market research pie, the most basic division is between *secondary* and *primary* research.

Secondary research is the perfectly honorable use of existing information to investigate a market. Government documents, public use data, periodicals, databases and industry-wide reports are common examples of secondary research—current and historic sources available for interpretation. Even though it may originally be based on primary research, Gartner’s core research fits within the secondary research category because it is syndicated to a broad audience.

While secondary research is useful—often vital—there are two major ways that secondary data are insufficient:

- **Not from the “horse’s mouth.”** As Peter Drucker points out, “Marketing is the whole business seen from the point of view of its final result, that is, from the customer’s point of view.” Secondary information and industry data are usually several steps removed from telling you directly about the customer’s unique and current perspective, especially as it pertains to *your* questions.
- **Usually not proprietary.** Most secondary research is available to anyone with the desire to procure it. Your information is likely to be identical to your competitors’. And it may not answer your needs, respond to the questions you want to ask, or it may simply be unavailable for a market niche you are interested in.

While you need to know the basics of your market through secondary data, you are likely to find the bulk of your effort and budget is focused on primary market research—knowing the needs and preferences driving *your* customers’ buying decisions.

This primer focuses on primary market research.

II. QUESTIONS MARKET RESEARCH ANSWERS

In the next few pages, we'll examine the classic questions market research addresses.

Keep in mind:

- The five key questions define *categories of answers* research gets for you. They are not ways to collect or analyze the data. These methods are discussed in Chapters III and IV.
- There is plenty of overlap between types of research. Most projects combine at least two. For instance, investigations of product names and package designs are often done together. Or the second wave of a positioning study includes both tracking **and** image research.

Five key questions. Nineteen types of research.

To reduce a long list into bit-sized chunks, we've grouped the questions research answers into five fundamental categories or types:

- *How are we doing?*
 - Positioning/image/awareness.
 - Customer satisfaction/loyalty.
 - Communications effectiveness.
 - Monitoring/tracking.
 - Brand equity.
- *What do they need? How big? How many? How can we divide them up?*
 - Market sizing.
 - Price/volume.

- *What are they thinking? How are they acting? How are they using it?*
 - Customer/user behaviors and attitudes.
 - Media research.
 - Channel research.
 - Influentials/opinion leaders.
 - Ethnographic studies.

- *Who are they?*
 - Customer profiles.
 - Segmentation.

- *What about our new idea?*
 - Product concept.
 - Market simulation.
 - Communications development.
 - Packaging design.
 - Naming.

The following pages briefly describe each type of question and give examples of what gets asked.

How are we doing?

Positioning/image/awareness.

Used to determine your reputation and that of competitors. Typically looks for strengths, weaknesses and gaps representing strategic positioning opportunities. Typical lines of questioning are:

- Who (which brand) comes to mind first?
- What defines leadership in the market?
- Who has the leader position? Why?
- How important are price, reliability, delivery, support and performance—or color, taste, packaging and texture (whatever factors fit the market)?
- Can we reposition the leader with better performance on key market parameters?
- How well do we perform against the market's criteria?
- How well does the competition perform against these criteria?
- What are the open positions? Can we fill them?
- Who will compete with us for these positions? How can we best differentiate?

Customer satisfaction/loyalty.

Measures how stable your customer base is—or isn't.

- What is important in satisfying our customers?
- How do we rate on these characteristics?
- Where do we need to improve? Why have we lost sales to competitors?
- Would customers buy our product again? Recommend it to others?
- What is the link between satisfaction and repurchase or amount spent per customer?

Communications effectiveness.

Measures advertising or public relations results. Typically conducted prior to a campaign, during the campaign period, or after ads or PR have run.

- How effective have our efforts been?
- Is our communications strategy working?
- What message is the audience getting from our approach? Is it what we intended?
- How are we doing against competitive campaigns?

Monitoring/tracking.

Measures trends and changes over time and may target a broad category or a single product. Terms associated with tracking are “pre” and “post” or “baseline” and “benchmark.”

- How is our image changing?
- What is the effect of our competitor’s new service or ad campaign?
- How are customers reacting to our service improvements?
- What are the trends in the marketplace and their strategic implications? How are consumer habits changing? What are the trends in our share or usage?
- How is purchase behavior changing? What new channels are opening or old ones closing?
- How do we rate over time? Can we profit from focusing on products, people, communications, availability, pricing or some other part of the marketing mix?

Brand equity.

Elevates individual performance metrics such as customer loyalty and intangible market position to include assessments of real value in order to measure the definable equity of a brand or its competition. Clearly understanding brand equity can help create a roadmap for more effective marketing and set the company up to deliver value to the customer.

- Does our brand actually create a purchase preference?
- Will our brand command a price premium? How much?
- What elements of market position would be most effective in increasing our brand equity?
- How can we leverage our brand equity into new markets or opportunities?

What do they need? How big? How many? How can we divide them up?

Market sizing.

Determines size, share and purchase patterns.

- What is the incidence of users or potential purchasers?
- Where is the installed base concentrated?
- Where is purchase intent concentrated?
- What are competitive market shares?
- How large is the annual volume?

Price/volume.

Specifically focuses on the relationship between price and sales volume (price elasticity).

- How price-sensitive is the market?
- What are the effects of raising or lowering prices?
- What does the price curve look like and are there “knees” in the curve that suggest optimal pricing to maximize profitability?
- How many will we sell at different price points?
- What does the demand profile or mix look like for a family of products?
- How should we respond to potential market shifts by competitors?

What are they thinking? How are they acting? How are they using it?

Customer/user behaviors and attitudes.

Answers key questions about how your users relate to the product or service.

- What do they think about the product?
- How do they buy it?
- Why do they buy it?
- When and how often do they purchase? Who gets involved?
- Where do they buy it?
- How do they use it?
- How does using it fit into their lifestyle? Does it fulfill emotional or psychological needs?
- What do they expect to do in the future?

Media research.

Finds out how purchasers get product or sales information. Often focuses on media habits (publications, TV and radio) or other communications (trade shows, point of purchase and direct mail).

- What does the market watch, attend or read?
- What are the most efficient media for delivering the message?
- How do customers use media differently as they progress through the purchase cycle?

Channel research.

Determines priorities and protocols when dealing with distribution channels. Often focuses on dealer incentives, promotional programs and manufacturer support (advertising and service).

- How do the channels operate? What are their behaviors, values and activities?
- How do they decide what products or services to promote? How can we motivate the channel?
- Should programs be structured to appeal to different channels or to channels that serve specific markets?
- What needs do channels have for product improvements or support?

Influentials/opinion leaders.

Includes research with influential audiences such as financial analysts, editors, industry pundits or other opinion-shaping leaders.

- How do they feel about our company and its future?
- What strengths and weaknesses do they perceive in us? In our competition?
- How do they expect the future to change and influence our business?

Ethnographic studies.

Rather than gathering reports of how products are used or ratings of attributes that are important, this class of research is based on actual observations and discussion with customers in real-world settings. Often a way to uncover key insights about a customer's relationship to the product.

- How do customers actually use the product?
- Is there an emotional response to the act of buying, using or sharing the product?
- How do customers interact with others in relation to the product? Is there a sense of community or partnership?
- For first-time users, is the setup intuitive? Is the experience pleasant?
- Are there common work-arounds to problems?

Who are they?

Customer profiles.

Characterizes your users.

- What are the market demographics (age, income, marital status, education, etc.)?
- What are the psychographics (attitudes, beliefs, lifestyles, self-image, aspirations, etc.)?
- Does Pareto's 20/80 rule apply? (Twenty percent of beer drinkers drink 80% of the beer sold.) If so, what typifies the heavy user?

Segmentation.

Sorts users/buyers/purchasers/consumers into separate “buckets” based on their differing needs.

There are many methods available for segmenting a market. You can ask your sales force how the market distributes itself. You can look for some logical way to divide people: geography, age, frequency of use, industry and so on.

However, there are some powerful and sophisticated techniques for doing needs-based segmentation. These research methods will actually reveal hidden clusters of unfulfilled needs. Modern segmentation research is one of the best tools we have for uncovering new opportunities.

- What needs do users have? How do different groups of customers match with sets of needs?
- How large are the different needs-based segments?
- Are there new or hidden opportunities? How big are these opportunities relative to known segments?
- What characterizes each needs-based segment?
- What clusters of needs are going unserved and how large is the potential for meeting these needs?
- How well do our existing or new products or services fit?

What about our new idea?

Product concept.

Used two ways: to generate new product and service ideas or to refine and evaluate concepts.

- What does the market need?
- What do customers like about our new idea? How does it fit with their needs/desires?
- What don't they like? What are the unnecessary bells and whistles?
- How can our idea or product be improved to maximize its potential?
- How does our new idea stack up against the competition? Will we have an advantage?

Market simulation.

Models the market to determine how purchase behavior changes when variables are altered. These variables may include price, product features, advertising, availability, competitive mix, performance and other key buying influences.

While the variables are nearly unlimited, some examples are:

- How will the market respond to the introduction of our new product?
- What is the effect of a price increase?
- What will happen if a competitor introduces a similar product? What if it's 10% less expensive?
- What impact will different advertising approaches have?
- What is the purchase intent? What is the repurchase likelihood?

Communications development.

Develops advertising or public relations. Used to help you understand the target audience, their motivations and how they respond to various marketing approaches.

- What are the market's "hot buttons"? How does the product category fit into the business strategy or consumer lifestyle?
- What catches customers' attention (specifications, graphics, positions, price, benefits or other "hooks")?
- What are their reactions to existing ads in the category?
- What are their responses to prototype advertising concepts?

Packaging design.

Investigates use and appeal of different product packages. Works for both new and existing designs.

- What do customers like and dislike about the existing packaging? Of competitors' packaging?
- What packaging approach is most effective in selling the product?
- What are the aesthetic appeals, messages and implications of the design?
- What functional benefits or constraints are perceived in the packaging?
- How do customers respond to ingredient statements, instructions, documentation or other point-of-purchase communications?
- What environmental or social questions does the packaging raise or answer?

Naming.

Helps determine and define product names and positions. Some marketers say what you call your product is the single most important product decision you make.

- What types of names are appropriate in the category?
- How do customers interpret naming conventions across a product family?
- How do customers respond to possible names?
- What images are evoked by specific names? How do these images fit with the brand identity?
- How well is our new product name received? What does the name contribute to our product?

III. HOW TO GET THE ANSWERS

Qualitative vs. quantitative.

So far, we've described five primary types of questions and 19 variations. Now let's take a look at the methods used to answer these questions.

Of the many research methods, all can be divided into two fundamental categories. They are either qualitative or quantitative.

- **Qualitative research.** Used to provide an understanding of *how* customers feel about a question or topic and *why* they feel that way. Instead of looking for percentages and projectability, consistent viewpoints provide a basis for hypothesis testing, concept refinement, communications development, quantitative research and product input. The “data” are attitudes, impressions and viewpoints—not hard numbers. Yet, consistent results across multiple interviews can provide a firm basis for decision-making.

A toothpaste marketer might use qualitative research to answer questions such as: Are there any unmet needs current brands don't address? How do consumers express their needs in their own words? What useful observations can we make about their comfort or discomfort discussing dental hygiene? What kinds of images are most effective in toothpaste advertising? How do consumers react to “dental hygiene humor”? What really motivates a customer to choose one brand over another?

- **Quantitative research.** Much of market research is numbers-based. A questionnaire is used to collect data from a representative sample, and the results are projectable to the population surveyed. Quantitative research is conducted to measure awareness of companies and products, develop customer profiles, determine market size, and document customer behavior. Our toothpaste marketer, for example, might use quantitative research to answer questions such as: How often do respondents brush their teeth? Who buys which size of toothpaste most often? How many are aware of my brand?

Keep in mind that quantitative means numbers. You can do statistical tests and routines, talk about percentages, and project to the marketplace. Be very cautious if you see numbers, statistics or market projections from small-sample, qualitative research.

Basic methods.

Now for the techniques used to get the answers. Some of these procedures can be used qualitatively or quantitatively and can also be combined in order to reach specific research objectives.

The following are methods used frequently by market researchers:

- Mail surveys.
- In-person interviews.
- Phone interviews.
- Web-based (Internet) interviews.
- Disk-by-mail.
- Central location tests.
- Intercepts (mall, exit, on-the-street, trade show).
- Panels.
- Focus groups.
- Store audits and mystery shops.

Mail surveys.

A mail survey uses questionnaires and/or stimulus materials sent to respondents through the mail or courier service. Most often the questionnaire is on paper but in some settings a computer disk allows for more intelligent interviewing. The respondent fills out the questionnaire and returns it. Mail surveys typically provide some gift or payment for participation.

- **Advantages.**

- **Less costly.** Mailing out a bunch of paper questionnaires is usually the cheapest way to do research.
- **Can show visuals.** Pictures, drawings or graphics can be included in the mailing. These are sometimes helpful to explain or show concepts being researched.
- **Can do some complex tasks.** Rank ordering lists or sorting items is possible when using mail surveys but tough to accomplish over the phone.

- **Disadvantages.**

- **Low response rates.** While there are techniques to enhance response rate, mail-out questionnaires are often returned by fewer than one in five of the recipients (often less than one in 20). Bias may occur since the respondents can be largely self-selected.
- **Limited for unaided awareness or open-ended questions.** (See the section entitled “Useful Market Research Terms” for definitions.) These two types of questions are difficult or impossible to ask, and the quality of data can be compromised.
- **Slow turnaround.** Mail-outs typically take weeks or months. Phone or Web surveys can be completed in days or even overnight.
- **Uncertainty about respondent qualifications.** Who really filled out the questionnaire? Was it an assistant or secretary (or the executive’s teenage son) instead of the targeted executive?

- **Exposure to competition.** This can be of particular concern if researching new or confidential concepts. If the competitor gets your questionnaire, they can replicate your research by mailing copies to a similar population and processing the results. At the very least, they'll know what you're up to.
- **Data limitations.** Many mail-out questionnaires are returned with incomplete or obscure answers. These can't be clarified or probed. The usual action is to discard these questionnaires if the amount of missing data is large or on critical questions.
- **Length restrictions.** Without special care, such as incentives or advance contact by phone, longer mail-out questionnaires are usually not returned. Also, questionnaires that *look* long or complex reduce response rates.

In-person interviews.

Data can be collected by sending researchers to conduct face-to-face interviews. As the questions are answered, the researcher records the responses on a questionnaire, enters them into a computer or tapes the interview. Door-to-door interviewing is one version of this tool. In-depth, pre-recruited personal interviewing is another.

- **Advantages.**

- **In-person.** The respondent can see and be seen by the researcher. These interactions can be valuable in building rapport, eliciting cooperation and encouraging candor.
- **Depth or length of interview.** An hour-long interview in a respondent's home or office is expensive but can be a more pleasurable experience for the respondent. A one-hour interview on the phone can be too tedious.
- **Show and tell.** A wide variety of visuals can be used—demonstrations, feature trade-outs (see “Conjoint Analysis” in the Advanced Techniques section), catalogs, videos, computer screens and concepts.

- **Disadvantages.**

- **Expensive.** While showing some resurgence, door-to-door interviewing had almost become extinct—largely due to the cost disadvantage compared to telephone interviewing. Travel costs often make face-to-face interviews with business decision-makers prohibitive.
- **Quality control.** Supervising an in-person interview is more difficult than monitoring telephone interviews.
- **Slower.** It usually takes more time to find and interview respondents in person.
- **Potential for bias.** The respondent may react to the interviewer's facial responses, appearance, race, clothing, etc.
- **Less respondent anonymity.** Some sensitive subjects may actually be better researched by phone than in person. There may be more pressure to give conventional or socially acceptable responses when being interviewed face to face.

Phone interviews.

Telephone interviews have become a standard method of collecting data. Telecom line charges have plummeted and the availability of up-to-date, electronic lists of respondents meeting specified criteria have improved targeting. Telephone interviewing has become a de facto standard for quantitative data collection. Using a computer-aided telephone interviewing (CATI) system, the interviewer records qualified respondents' answers on a questionnaire or at a computer terminal. CATI assists the interviewer by managing skip patterns and quotas via a computer network. The computer even dials the number. Completed interviews are usually pipelined directly from the terminal to a computer database for faster analysis.

One innovation that has had a dubious effect is the predictive dialers used by large call centers, especially telemarketers. Here the computer searches and finds live phones, ready to be answered. While predictive dialing can greatly increase interviewer efficiency, it results in a lot of people answering their home phone to find no one is there—an annoyance that is fueling a backlash among consumers.

Qualitative phone interviews (sometimes called executive interviews) consist of a structured but more open-ended discussion with the respondent. The interviewer uses a guide to provide interview direction and ensure important topics are covered. However, the interviewer may also ask follow-up questions to probe and clarify respondents' answers and obtain in-depth information. Qualitative phone interviews are typically audio-recorded so summaries of the discussion can be produced and used for analysis.

- **Advantages.**

- **Speed.** As mentioned earlier, phone interviews can be conducted more quickly than mail or in-person surveys. A large phone center can generate many interviews in a short period of time.
- **Moderate cost.** Less expensive than in-person interviews—but more expensive than mail-outs or most Web surveys.
- **More personal.** A telephone interview has some of the attributes of a face-to-face interview. Respondent qualifications can be ensured, responses can be probed and clarified, and questionnaires can be completely filled out—even if a callback is required. Rapport leads to higher levels of cooperation.
- **Confidential.** Sponsorship or even the geographic origin of the survey can be well-disguised.
- **Quality control.** Non-interruptive monitoring allows for close supervision of the interviewing process.

- **Disadvantages.**

- **Limitations on length.** Depending on the subject and audience, phone interviews longer than 30 minutes can be difficult or impossible.
- **No visuals.** While techniques can sometimes be combined (mail the concept drawings, then ask the questions by phone), showing visuals, demos or other hands-on procedures is normally not possible by phone.
- **Cooperation barriers.** As more telemarketing and phone surveys are conducted, respondent cooperation is sometimes a barrier. New technologies such as caller ID may increase these barriers.

Web-based (Internet) interviews.

Web-based interviewing is growing in popularity, especially in North America, as Internet penetration rates increase, online communities form and the population becomes more computer literate. Currently the term applies to a wide range of techniques, including:

1. “Instant polls”—often one- or two-question surveys posted on Web sites. The surveys are designed to measure and present opinion about a topic of interest to the audience, but the major benefit is to encourage interaction with the site.
2. Simple, static Web forms which can be used to collect information or opinions from an online audience. Analogous to a paper and pencil survey in that there is generally no intelligence built into the survey and limited ability to validate responses.
3. Full-function Web interviews. These are the Web equivalent of CATI surveys. The supporting application can create intelligent skip patterns and otherwise alter the questionnaire on the fly to make it more pertinent and enjoyable for the respondent.
4. Other Web-enabled data collection tools, such as chat boards, online focus groups and virtual shopping simulations.

• Advantages.

- **Speed.** Using online panels or e-mail lists, a survey can be completed with great speed—24 hours is not uncommon. Most systems provide online display of tabulated results, making rudimentary analysis fast and easy.
- **Fun for respondents.** Most computer users seem to enjoy doing Web interviews and many prefer them over other forms for convenience.
- **For special designs.** More sophisticated techniques may benefit from being administered on a computer where complex tasks can be supported and stimuli shown.
- **Potential for low cost.** Since Web surveys remove the labor associated with telephone interviewing, costs can be dramatically reduced when online lists/panels are used.

- **Disadvantages.**

- **Not appropriate for all audiences.** Some types of respondents may lack the skills or equipment to do Web-based interviews. While strides have been made in creating online panels that reflect the population well, researchers must still be aware of potential selection biases.
- **Self-selection.** Like mail surveys, Web surveys are much more susceptible to self-selection bias than are telephone or more active recruiting methods. Research has indicated that self-selected respondents are more likely to give higher ratings than the larger population.
- **Data validity.** In most cases, it is impossible to determine whether or not people who are responding to the survey are who they say they are.
- **Difficult to establish quotas or detailed screening.** The level of screening is often limited by panel vendors to prevent overburdening the members. Often it is cheaper or easier to complete more interviews than necessary in order to ensure sufficient numbers of target groups.
- **Cost.** In situations where e-mail or Web panels are not available, respondents must be recruited by more traditional methods, often telephone. Due to relatively high drop-out between the phone and Web portions, cost and turnaround can approach or exceed those of telephone surveys in this situation.
- **Best for short surveys.** Survey abandonment rates rise to more than one-third at 20 minutes. Complexity is also an issue. Abandonment rates increase when more than 25 screens are required to complete the study (likely a reflection of both fatigue and transmission speeds).

Disk-by-mail.

This technique combines three methods:

1. Telephone interviewing to find and qualify respondents.
2. A mail-out when the self-administered survey on computer disk is sent to the respondent. Often stimulus or reference materials are included.
3. Computer-aided interviewing since the respondent completes the questionnaire on-screen to answer questions.

- **Advantages.**

- **Fun for respondents.** Most computer users seem to enjoy doing disk-by-mail interviews. Cooperation and return rates can approach 80% for some studies.
- **Good for long questionnaires.** Disk-by-mail often works best for extremely long interviews. Some questions can be answered faster on a computer than when read over the phone. It is also possible to divide the questionnaire between the phone recruit and the disk survey, thereby reducing respondents' perceptions of the total length.
- **For special designs.** More sophisticated techniques may benefit from being administered on a computer. Adaptive conjoint is one example.

- **Disadvantages.**

- **No computer.** Some types of respondents may lack the skills or equipment needed to do disk-by-mail surveys. This technique is best for business or technical markets or computer-savvy consumers.
- **Turnaround.** Since calling, sending, filling out and returning are all required, disk-by-mail surveys may take a few weeks longer than telephone interviews.
- **Security.** In spite of protection, an expert could copy your questionnaire and send it off to a competitor—just as with other mailed-out, self-administered questionnaires.
- **Expense.** Because of the multiple steps involved, potential for attrition between the recruit and the disk steps, and the need for an incentive, disk-by-mail studies are more costly than other, one-step methods.

Central location tests.

Central location tests (CLTs) are in-person interviews (commonly CAPI) conducted at a central site. Respondents are qualified by phone and recruited to come to a specified location in one or more cities at a certain date and time. Respondents are often scheduled in groups or “waves” so multiple interviews take place at the same time. CLTs are frequently used to learn reactions to new products or identify taste preferences in foods. A gift or payment is typically provided.

- **Advantages.**

- **A viable alternative.** CLTs are the only practical way to conduct certain kinds of research. When food has to be prepared for taste tests, non-transportable prototypes must be demonstrated or the research investigation involves complex activities, CLTs greatly simplify the process and allow large numbers of qualified people to participate.
- **Cost-effective.** Because respondents travel to the research site, information can be collected in a relatively short period of time. Costs for CLT data collection are typically lower than for in-person interviews. Since respondents can be recruited by phone, CLTs also have advantages over mall intercepts because data can be collected from well-targeted audiences or groups with low incidence in the population.

- **Disadvantages.**

- **More expensive than phone.** The primary disadvantage of CLTs is that data collection costs are typically higher than for phone or Web interviews.
- **Complex setup.** CLTs often require complex planning and mechanics. The logistics of taking a road show to several sites throughout the country can be considerable.

Intercepts.

There are a number of types ranging from the old “man on the street” approach to trade show interviews, exit polling and mall intercepts. Interviewers approach potential respondents and ask if they would be willing to answer some questions. Respondents are typically asked several screening and survey questions. The interviewer records the responses on a questionnaire. Target consumers may taste food, watch a commercial or review other material. Sometimes they are given a product to use (product placement or in-home placement) and are recontacted by phone at a later date to answer additional questions. A gift or payment may be offered.

- **Advantages.**

- **Lower-cost personal interviews.** Since these are face to face, intercepts have many of the benefits of other personal interview techniques: establishing rapport, probing and clarifying, and use of visuals.
- **Can target specific audiences.** Whether a shopping mall or a polling booth, intercepts can allow you to go where the target audience congregates.
- **Can bring person to the interview.** When extensive preparations (food) or displays (store setting) are required, an intercept may be ideal. The respondent can be brought to the interview rather than trying to take complicated props to the respondent.

- **Disadvantages.**

- **Convenience sample—may not be representative.** For many projects, fishing in a stream of available people may result in a small catch or in getting the wrong type.
- **Not available.** There may simply be no good concentration available to intercept. Even some trade shows can generate notoriously flaky audiences. Shopping malls can become overused or don't reflect the right demographics.

Panels.

Panels usually consist of people who supply information on a regular basis. Questions typically focus on subjects such as purchasing behavior, purchase intentions or advertising awareness. In some cases, panels are recruited simply to provide a group of qualified respondents who can quickly give input for questions about consumer preference or new product development. Occasionally a group of dealers may serve as panelists by reporting on sales, inventory levels and their views of market trends. Panels can be used as a source of respondents for in-person interviews, telephone interviews, Web interviews or even central location tests.

- **Advantages.**

- **Quick or continual access.** Panels offer ready and ongoing access to information. Since panelists are pre-recruited, researchers have a group of respondents available for questions on changes in product preferences or perceptions of an industry. And since the panel can be revisited, changes can be measured over time.
- **Less costly.** Panels provide the opportunity to inexpensively develop a continuing or long-range view of the market, without needing to conduct multiple surveys.
- **Shorter surveys.** Respondents are familiar with the process and have background information on the product or subject.

- **Disadvantages.**

- **Panel conditioning.** One difficulty in using a panel is ensuring it remains representative of the market and members do not become professional opinion givers. Panelists must be rotated out and new ones added regularly.
- **Quality control.** Quality can be affected when panelists who are supposed to keep daily records of their purchases, activities or perceptions sometimes fail and end up reporting biased or inaccurate recollections.

Focus groups.

Focus group research uses group discussions to learn about a topic. Six to 12 respondents are typically recruited for a focus group. Two or more focus groups are usually conducted to determine which results are consistent between groups and therefore reliable. Different locations may be used to balance or minimize regional bias. Most focus groups are conducted in special focus group rooms so the discussion can be observed and video-recorded. Occasionally focus groups are conducted by telephone using conference calling. Web-based, online focus groups are increasing in popularity for bringing geographically dispersed participants into a discussion.

Focus group discussions can last from about 30 minutes to two and one-half or even three hours. Sometimes participants who have extremely valuable or specialized knowledge are invited to a retreat, where they participate in several focus group discussions over a period of two or more days. Focus group members receive an honorarium or “co-op” for their participation.

Focus groups are conducted by one or two researchers (or moderators). During the course of the discussion, participants are asked a specific set of questions. Focus group moderators listen carefully to the responses and ask follow-up questions to learn about the underlying issues, attitudes or beliefs. The discussions are later analyzed to learn about participants’ opinions, perceptions, reactions and points of agreement and disagreement.

Traditional focus groups use a single moderator, are shorter and have fewer participants than dual moderator focus groups. Dual moderation is most effective for complex topics, technical markets or where intricate logistics are involved. Greater depth and more interaction between moderators and observers are characteristic of dual moderator focus groups.

- **Advantages.**

- **In-depth.** Focus groups can get at information that cannot be obtained in other ways. Participants not only discuss their own opinions, they have an opportunity to react to the ideas of others. The give and take among focus group participants provides a powerful dynamic missing from individual interviews.
- **Hands-on.** There is also opportunity for extensive direct investigation. Products can be tried out, food tasted, concepts reviewed, and reactions observed and probed.
- **Timely.** Immediate. Post-group debriefings with moderators and clients can create shared insight and reduce the likelihood of selective hearing or premature conclusions.

- **Disadvantages.**

- **Misused.** There is often a temptation to consider focus group results a substitute for survey data. Focus group research investigates the nature of attitudes and motivations, not their frequency in the population.
- **Misinterpreted.** Even experienced researchers can be challenged in determining which findings can be generalized from focus groups. Since they are so immediate, naive observers may be inclined to extract their own conclusions—perhaps reflecting their own bias or selective perception.
- **Poorly managed group dynamics.** Conducting focus groups requires skill, insight and experience. Not everyone should be a moderator.

Store audits and mystery shops.

These techniques are used to find out what is happening on-site. A trained auditor/evaluator is usually sent to the location. Store audits often examine what is on the shelves or whether the dealers are actually using the point-of-purchase materials. Mystery shops typically simulate a customer-supplier interaction. A mystery shopper calls a bank branch to inquire about a loan, visits a department store to return merchandise or purchases a meal in a restaurant.

- **Advantages.**

- **Unique perspective.** Going on-site is often the only way to see a situation as the customer does.
- **Reward.** Mystery shopping, in particular, is used to motivate and compensate superior performers.
- **Reliable.** In most cases, visiting a site, calling a customer service rep or checking store shelves will give a fairly typical picture of what conditions are—especially if done regularly and aggregated into a large sample.

- **Disadvantages.**

- **Depends on the evaluator.** The quality of audit data or mystery shopping is only as good as the person doing it. Being an effective judge can be a challenge for many.
- **Scapegoating.** Since most of us don't like to be graded, the credibility of the mystery shopper can easily be questioned.
- **Limited sample.** Visits or calls are not continuous, so the period of observation may not be typical and may create a false perception of reality.

Who you research.

Defining the target.

Whether doing some form of survey or focus groups, questions of who to include or exclude are important. How well we define research targets has far-reaching effects: too narrowly defined and the market may be too small or too expensive to research, too broadly defined and interviews are wasted or results diluted by including irrelevant participants.

The first step is to develop a procedure or a list of elements such as cities and individuals from which the sample will be drawn. This is the sample frame. Typical sample frame questions for the semiconductor market might be:

- Since design engineers do all the specifying, should they be the only respondents?
- But purchasing agents select the actual supplier. Shouldn't they be included too?
- And engineering management has veto power. Can we afford to leave them out?

Unless thoughtfully managed, the process can get so inclusive it justifies researching everyone from the janitor to the CEO.

Even more common is the problem of creating so many hurdles to inclusion that the target becomes an elusive needle in a haystack.

The following example can result from overdefining the sample frame: MIS directors in Midwestern Fortune 500 companies whose main platform is Unix used for non-technical applications and who have no prior experience with mainframe computing.

Not only will these respondents be difficult to find, the search may reveal that none exist.

How many to interview?

While there are lots of observations from experience and common sense, the “rules” about sample size or number of focus groups are often very general and still require judgment. Yes, more interviews or more groups will increase your confidence in the results. But, adding interviews or groups reaches a point of diminishing returns and wastes dollars a bit quicker than most would naively assume. For example, to get twice the reliability you need to quadruple your sample.

Researchers will be able to give you theoretical error numbers for different samples, and these are well worth considering. However, the following are often more important to weigh:

- How big is the population? If your target is customers for a high-end industrial product, then there may be only a couple hundred of them in the world. If you interview all of these, there is no sampling error because the research is a census, not a sample.
- How varied is the population likely to be? Depending on the topic, you may be able to do smaller samples with corporate CEOs who are often white, male, 45 to 65 years old, college graduates and well paid, than with a general population having more variance in ethnic, educational, age and income factors.
- What is the non-response likely to be? In general, having people select themselves out of a sample may be a greater source of error than having too small a sample. Some researchers suggest if the response rate drops below 70%, spend your money and time finding ways to improve the rate rather than increasing the sample.
- How important are the decisions to be made and how much error can be tolerated? If you just need a rough measure or a disaster check, a small sample may be adequate.
- How are you going to break down the data? If you want to look at sub-cells and end up having fewer than 50 or even 25 in a sample, you may not be able to conclude anything. If you are going to use multivariate analysis techniques, you may need more sample. If you do

only a single focus group with a particular type of user, you have no cross-check to support that this group wasn't totally unique.

- Who else needs to believe in the research? While it can be hard to surrender to “design for management,” there are times when larger samples are necessary for audience credibility.

There are a number of types of samples. For further information, see “Sampling” in the Useful Market Research Terms section.

How you ask.

Creating the questions.

One major goal in developing any sort of questionnaire or discussion guide is to ask and answer questions fulfilling the objectives of the research.

While designing for the objectives may seem obvious, constant vigilance is necessary. A question may be “interesting,” but how does it help us understand which features are valued in a new printer? Maybe we've always asked this question, but will it help meet the purposes of this specific project?

Another acid test of good design is to ask: “What would we do differently if we knew this answer?” Even better, “What would we do differently if we knew the answer was 72%?” By requiring market research to prove its actionability in the design stage, wasted questions or even needless projects can be killed.

Designing effective questions depends on twin criteria:

- Does this help fulfill the research objectives?
- Will knowing this answer affect our actions?

Ways to ask—seven fundamental categories of questions.

Categories often overlap. For example, select-a-response-option questions are generally closed-ended as well. The seven basic categories are:

- **Open-ended.** These are the classic free responding questions where people answer in their own words and those words are the response. “What did you like best about the printer?” “What improvement suggestions do you have for Wal-Mart stores?”
- **Closed-ended.** Here the responses are limited to a set of options or ranges—agree/disagree, under or over \$1,000, never/once/more than once. Rating scale, check-the-box or circle-the-answer questions are all closed-ended.
- **Unaided.** These are questions where respondents are asked to search their awareness for an answer. “Who comes to mind first as a supplier of networking components?” “Please name all the software vendors you can recall.” By definition, these questions are not prompted. The respondent receives no hints about possible responses other than the question itself. The questions measure “top-of-mind” awareness.
- **Aided.** These are questions where the respondent may receive some prompting. Frequently, an aided question will follow an unaided one, or names from a list will be read to the respondent if the names weren’t volunteered earlier. “Have you ever heard of Hewlett-Packard as a provider of laser printers? Canon? Epson?”
- **Select a response option.** These are the questions offering a set of options. “Which store have you visited most in the last month—Office Depot, Staples or Costco?” “Do you prefer to purchase technical support on a pay-as-you-go basis or would you rather purchase an annual support program?”

- **Fill in the blank.** Technically, these one- or two-word answer questions are a version of the open-ends described previously. Almost any reasonable verbalization will qualify. However, they differ from true open-ends by asking for a single word or limited response set: “Which one company comes to mind as best fitting the characteristic of low-cost provider?” “What one word comes to mind when you think of IBM?” “Complete the sentence: ‘When I drink Pepsi Cola I feel [blank]?’” For a full-blown, open-ended question, responses are probed and clarified and may take on aspects of a brief discussion with several sentences of verbatim answers.
- **Rating scales.** Questionnaires frequently contain various sorts of scales. The classic in many countries is the one-to-10 scale—so popular that everyone knows what a “10” is.

Ratings are particularly useful for establishing a common basis for comparison, and many of our more powerful data-crunching routines require these scalar results.

There are four basic types of scales—nominal, ordinal, interval and ratio. Each scale type allows for a certain level of analysis on the data collected. For example, a nominal or “name only” scale assigns numbers/labels to objects and only percentages can be calculated. One level up, ordinal or rank scales allow for nominal calculations plus medians and percentiles.

Each type of scale has several variations commonly used in market research. Nominal scales can be multiple choice or binary. Ordinal scale variations include forced ranking, paired comparison, semantic and Likert. Interval scale variations are equal appearing interval, bipolar adjective, agree-disagree and equal width interval. Ratio scale variations include direct qualification, constant sum, constant sum paired comparison and reference alternative.

Interval or ratio level scales are generally favored because they require respondents to be discriminant and are appropriate for a greater number of analytical techniques. For definitions of scales typically used in market research interviews, see “scales” in the Useful Market Research Terms section.

Skip patterns and logic flow.

All but the simplest questionnaires have some sort of logic flow to them. These skip patterns are very much like the computer programmers' "if, then" statements. "If respondent is aware of National Semiconductor, then ask what products they believe the company produces."

These skip or logic patterns often become multilayered and complex. In many cases they may involve terminating an interview with an unqualified respondent or asking for a referral to someone who better meets the criteria. In the past, keeping track of these skips and not losing the logic flow was a major challenge. Now, with computerized interviewing, the logic is programmed into the questionnaire and the computer won't allow illogical responses to be entered.

Showing products and presenting concepts.

Many forms of research require the use of props (drawings, models, schematics, etc.) to show or demonstrate an idea to the respondent. Getting these concepts in front of the audience can be challenging. Sometimes it means asking qualified participants to come to a central site to see a demonstration and be interviewed. In other projects, the information can be shipped to the respondent with instructions not to open the package until the interviewer calls back.

Regardless of the method used, developing effective ways to present new products and ideas requires creativity. In general, more valid data is generated by showing more of what the actual new product will really be like. Using abstract verbal descriptions that can be interpreted in as many ways as there are respondents requires skill and experience to present and interpret.

Hands-on is always more reliable than, "Oh, I didn't know you meant **that** color of red."

Putting it all together.

Once you've decided *what* to ask, putting the questions together and structuring the interview is both an art and a science. Some of the hallmarks of quality questionnaires are:

- Is there a smooth and logical flow to the questioning? Usually, interviews work better if they begin with more general and open-ended questions and narrow down to specific topics or areas for further probing. This “funnel” approach feels natural and better replicates the flow of normal conversation.

Respondents will struggle and waste energy trying to follow a line of questioning that appears to hop and skip from one topic to another without rhyme or reason.

- Do questions interact with each other to influence results? Would the response to one question affect the response to another? Improper question order is a significant source of bias. Imagine the influence on brand awareness if you mention a brand name in an early question and later ask for an unaided response on which brand comes to mind for the category.

Question order can set up a tone or momentum and create answers that aren't reflective of the person's true thoughts and feelings. Politicians are infamous for asking a set of rhetorical questions that lead directly to only one possible conclusion. While often unintended and more subtle, every interviewing process should be examined for the possibility of bias created by the order and flow of the questions themselves. Sometimes you need to vary the order to avoid bias.

- Are some questions better asked at the beginning or end of the interview? Sensitive questions such as income or budgets are better asked near the end. By then the respondent has become comfortable with answering and will usually have more rapport with the interviewer.

In other situations, the first questions can be critical to gaining respondent cooperation. For example, young musicians tend to enjoy talking about their musical influences and the types of music they prefer. By asking some of these more engaging questions early in the

interview, the number of refusals can be substantially reduced and a high rate of cooperation can be achieved.

Most markets have these “hot buttons.” By including early questions that respondents enjoy, the tone is set for the remainder of the interview.

Pretesting. Making sure the questionnaire does the job.

Most questionnaires require some sort of pretest. While an experienced designer develops an eye for effective design, no one can perfectly anticipate the way a questionnaire will work when actually administered—respondents hear something other than what the researcher intended; instructions need to be added to help interviewers around unanticipated rough spots; or the interview takes 25 minutes instead of the budgeted 15. All of these types of problems need to be addressed before hundreds of interviews are conducted.

Most pretests involve having the designer brief a set of interviewers and then monitor interviews to hear how the questionnaire is working (or conducting a Web survey with a small group of respondents). In spite of the added cost and time and the possible imprecision of pretesting, this process is an essential ingredient in quality research and generally saves money and heartache in the end.

Other rules of thumb.

- **Thoroughly define research objectives.** You can't get there if you don't know where you're going. Clear, actionable objectives are basic to good research. Be parsimonious. Hone down to the essential questions. Resist the temptation to include “kitchen sink” or “wouldn't it be interesting” questions.
- **Trust it.** Some people struggle trying to understand that you don't have to eat the whole pot of soup to know how it tastes. And researchers often confound the problem by talking about error variance and such.

Yes, there are lots of places to go wrong. Yes, you do have to stay involved and manage the process well. And even the best researchers implement less than perfect designs.

A much more common problem, however, is too much suspicion of data reliability—more hesitance in believing the research than willingness to blindly follow research recommendations. Overall, market research is highly reliable and getting better as techniques improve and the industry gains experience. This wouldn't be a multibillion dollar industry if the results weren't reliable.

- **How long are the results valid?** The only appropriate answer is, “It depends.” Some markets change overnight, and results are as stale as yesterday's newspaper. Others don't change appreciably for years.

As a general rule, change occurs slower than most of us impatient business people would like. Finding changes in markets may take awhile—give your advertising enough time to work before you try to measure its results. Don't expect your reputation to change overnight. Don't assume the market has heard of your new product just because a few customers mention it to your sales force.

- **Demand bias.** This is an important consideration. While most research is highly reliable, there is one rather subtle form of corruption that can truly create false results. This is demand bias.

Demand bias is created when respondents attribute motives to the research and are influenced to give answers different from their true beliefs or feelings. A common example of demand bias is a difference in results created when the respondent is made aware of who is paying to conduct the research. As a general rule, the sponsor should be carefully masked, and respondents should feel as though they are talking with an impartial third party—not being forced to tell the mother she has an ugly baby.

- **Respondent confidentiality.** Whether as participants in focus groups or as survey subjects, the people who answer research questions are assured complete anonymity. There are two major reasons for protecting respondents. One is to elicit their cooperation. The other is to truly protect them from the inappropriate exploitation of their assistance (using their responses as a basis for a sales call or contacting them and “badgering the witness”).

Researchers are adamant about protecting their respondents and believe the relationship is akin to the professional ethics required between a doctor and a patient.

IV. CRUNCHING THE DATA: AN INTRODUCTION TO ANALYSIS AND STATISTICS

Analyzing the research.

To this point, we've reviewed the kinds of questions market research asks (How are we doing? What about our new idea?). And we've recapped the primary methods for asking these questions (phone interviews, Web surveys, focus groups and so on).

Now let's turn to what may be the most mysterious and certainly the most consequential element: analyzing the results.

Our simple definition of analysis is: Making sense of research data so decisions can be made and actions taken.

Technology and automation have made more data available than ever before. We can slice and dice research in more ways—quicker and cheaper—than was imaginable even 10 years ago. The ease of generating more data has resulted in problems of information overload and placed even more emphasis on analytical quality.

Effective analysis is driven largely by the skill and wisdom of the analyst. The following are the hallmarks of the best:

- **Consistent with research objectives.** Quality analysis stays focused on the purpose of the research, on results that reflect the stated reasons behind the project. Getting off on tangents or dredging the data to see what might be scraped up should be avoided.
- **Willing to “wallow in the data.”** However, superior analysis takes time and much of that time is spent wading through detailed findings, testing and rejecting hypotheses, and grinding away at the results.
- **Ability to extrapolate.** Analysis often begins with small bits and pieces of data. But ultimately these parts must be brought together into an integrated whole that points the way for marketing implications and strategies.
- **Experience and common sense.** Both are clearly required to effectively communicate research insights.

- **Objectivity, empathy and interpretation.** The analyst needs to be able to bring a third-party perspective to the process. Bias has no place in analysis. At the same time, the analyst has a responsibility to see the data from the perspective of the client's needs, interests and capabilities. Quality research also requires a willingness to risk making informed interpretations and recommendations based on data, industry knowledge and experience. Good researchers are scientists who are willing to be insightful business advisors. Both objective data and the researchers' interpretations are needed—just be sure they are clearly labeled.

Even with all of today's complex statistical techniques, most analysis is descriptive—looking at the numbers, comments, interrelationships and patterns in the research.

While analysis is based on reviewing, describing and pulling meaning from raw numbers, there are statistical tools that allow us to see more and test our assumptions. The next two sections profile some of the statistical tools researchers use.

Practical statistics.

The first thing to know is: you don't need a degree in statistics to understand them—just a little practice. The second thing is: despite the advent of esoteric and powerful *analytical* methods, a handful of basics do most of the work.

Descriptive statistics.

These basic statistics remain the nuts and bolts of data analysis. While the marketing community attaches a certain glamour to techniques such as cluster analysis and perceptual mapping (covered in the next section), a working understanding of basic statistics is useful for knowing the reliability and projectability of your research findings. Descriptive statistics allow us to judge:

- **How varied the responses are to a given question.** Measures such as standard deviation and standard error clue us in to the variability of the responses—how much responses cluster around a central or midpoint. This variation affects how reliable the findings are—we can be more confident about accepting an answer that has very little variation from respondent to respondent than one that varies widely.
- **What is “typical.”** Mean (mathematical average), median (midpoint response) and mode (most common response) are common measures of the group’s response. Often a complicated set of questions can be reduced to several numbers that profile an “average customer” or “average user”—the “typical American man or woman” that *USA Today* is so fond of. The less varied the responses, the more representative are these averages.
- **The pattern responses fall into.** Most types of data analysis assume responses are normally distributed—that is, they fall evenly on both sides of the mean. Often, however, we find that the distribution of responses fits another pattern. Perhaps there is an upward “skew,” indicating that far more people fall above the average than below. On an agree/disagree question, for example, this skew would tell us that while some people strongly disagree, a majority of the sample agree and the average level of agreement is not really “typical.” Similarly, a distribution can be bimodal, indicating there are two camps, those who agree and those who disagree. Again, the average is not really representative here, and the pattern of responses gives us a better understanding of the market’s opinions. While there are a variety of statistical measures of distribution, often you will just see the pattern displayed in a graph or table.

One of the most valuable functions of descriptive statistics is testing significance. Given that variation in responses can affect the reliability of our answers, we may want to know just how confident we can be. There are several common types of significance testing:

- **Difference between two means or two percentages.** Suppose we sample two types of customers and their average weekly expenditure varies by \$50. How confident can we be that this is a true difference in spending patterns? It is common to use a 95% confidence level, which means that if we went out and measured expenditures between these two groups, we would expect that the same pattern in spending levels is observed in 95 out of 100 samples. However, while 95% is the common cutoff, we may choose to allow a greater level of risk and accept a 90% confidence level. Doing so will often allow us to reduce sample size and conduct research with a smaller budget.
- **Chi-square is commonly used with cross-tabulations.** When the responses to a question fall into several categories and you have two or more types of respondents, chi-square will tell if there is a significant relationship between response categories and respondent types. It does this by comparing the actual responses to an “expected” distribution that would occur if there was no relationship between the types of respondents and the results of the question. Chi-square is used only for discrete, either/or responses, not when a question allows multiple responses.
- **Confidence intervals.** Sometimes instead of comparing responses we want to estimate the reliability of a given response. A confidence interval can be created that says, if we asked this question of everyone, not just a sample, the true response would fall in a range around the response we got from our sample. This is the “margin of error” commonly referenced for polls presented by the media. A narrower or smaller range equals more precision. A wider or bigger confidence level means less precision. The width of this range will vary depending on the variation in the responses and the size of our sample. It is also affected by how definitive the response is—a bigger confidence interval will result for a response that is split 50/50 than for one that is split 90/10. As with tests of significance, there is a confidence level associated with the interval, usually 95%.

These and other basic statistics help us understand data we collect from a survey, a database of warranty cards or responses to a customer feedback questionnaire. Keep in mind two things:

- **If you go looking for significance, you'll find it.** Marketing data usually has hundreds of responses and respondents. Because statistical significance deals with probabilities—you might get dealt four aces, but that's not a typical poker hand—sometimes you'll see what appears to be a significant relationship where none actually exists. This random significance is one reason to form research goals and hypotheses before beginning the research and to verify findings by looking at other measures and information sources when possible.
- **Sometimes statistical significance doesn't mean squat.** Some people go through a dataset with a fine-tooth comb looking for the “significant” details. This is an admirable attitude if you are big on bean counting, but often things that are statistically significant are of no real value. This is especially true in large samples where a difference of a couple of percentage points can be a “significant” finding, but doesn't change the overall interpretation of the results. So, it's important to approach results with a broad market perspective and experience in interpreting research data—not just rely on tests of statistical significance.

Practical or managerial significance is probably the ultimate test. At what point are the differences great enough to require action? Statistical significance may be one indicator for decision-making, but significance alone is not sufficient.

Following are some advanced techniques that can be used with various qualitative or quantitative tools for more in-depth analysis.

Advanced techniques.

There are many variations to the following advanced techniques, but these we're about to discuss are the essential ones—the ones you'd take if you were going to be marooned on a desert island.

Regression analysis.

Regression analysis is the fortune teller of statistical techniques. The premise behind regression analysis is that if we know the level of one or more characteristics, we can predict the likely level of another variable. Knowing this likely outcome could help you be more efficient or have greater success.

Suppose, for example, that you are setting up a day-care service for dogs. You know that your service typically appeals most to families with two or more dogs and that proximity is key—people don't want to have to transport their pets very far for day care, and so it's important to locate the centers near the heaviest concentrations of two-dog households.

The census does a good job of telling you about people but not about pets. So you conduct research that shows that age, household size, income and ethnic background all correlate with whether a household has dogs as pets. Regression analysis allows you to create a formula to predict the mean number of dogs per household (not to be confused with the number of mean dogs) based on these demographics. With this formula, you could take the census data for every zip code and predict which ones would have a high dog-per-household count. These would be the areas you would target. The estimates would not be accurate in all cases, but the odds of success are much greater than if you selected areas at random.

Regression analysis is useful in several ways:

- **Identifying relationships.** Regression shows whether or not a specific outcome is largely influenced by or related to other factors and where the strongest relationships exist. Is there a connection between income and clothing expense and, if so, how strong is it? What attitudes contribute to the selection of my product over others?
- **Predicting outcomes.** If you knew all the important characteristics of a winning horse, you could increase your odds of picking a winner. That's why they don't let computers into racetracks or casinos. But many mutual fund traders use mathematical models that are versions of sophisticated regression analyses.

And, simply understanding what accounts for changes in a variable—sales, market share or new customers—can be of considerable importance.

Discriminant analysis.

The key to understanding discriminant analysis is easy—just look at the root of the word. This technique helps us understand what are the best ways to discriminate between different classes of people or objects. If we can be more discriminating, we can minimize risk and maximize revenue in addressing a target market.

A good example of how discriminant analysis might be put to use deals with securing a loan. Say a bank has been providing small business loans for a period of several years. Each time it provides a loan, the bank collects and monitors all sorts of information—debt-to-equity ratios, education level of the owners, years of work experience, etc. The bank also knows which borrowers have defaulted on past loans. By applying discriminant analysis to this volume of data, we can deduce what characteristics best distinguish the defaulters from the good loans. Then, by applying this “discriminant function” to a new loan application, it’s possible to predict how likely the applicant is to default in the future. Applicants who come out of the formula with too high a likelihood may be denied or required to secure additional collateral or have their parents cosign.

Discriminant analysis does not help us decide what groups exist—it is not a tool for segmenting. Rather, it helps us understand the differences between groups that we already know exist. The technique is very similar to regression analysis. However, discriminant analysis helps to differentiate between or to predict group membership, while regression analysis predicts a certain level of a result. Discriminant analysis is also useful for better understanding the demographics that differentiate market segments.

Discriminant analysis and some related techniques such as profit regression analysis are useful for:

- **Developing classifications of individuals or objects.** What distinguishes my customers from my competitors' customers? What differentiates a household that spends a lot on groceries from one that spends a little?
- **Predicting success/failure or membership.** Taking the first use a step further, once we understand what best discriminates between two or more groups, we can use this knowledge to predict the following: Which product configuration is most likely to succeed? How likely is this campaign to be effective with certain types of customers?
- **Understanding how brands differ.** In this use, discriminant analysis is very similar to perceptual mapping. In fact, perceptual maps are commonly developed from a discriminant analysis telling us which product characteristics or perceptions are best for distinguishing between brands or models.

Cluster analysis.

Cluster analysis is a set of techniques that use mathematical procedures to group individuals. Where discriminant analysis helps us distinguish between groups that we already know exist, cluster analysis helps us identify previously unknown groups. Cluster analysis can often be a valuable tool for developing a market segmentation strategy.

As an analogy, think of all the stations on the FM dial. Give someone who has no prior knowledge of the stations or of music the job of categorizing the stations into a set number of groups—you specify the number. You also specify what characteristics you want to have evaluated. What cluster analysis does is “listen” to each station and note the differences in the music and programs between each one. It then divides the stations so that each group has as little variation among its members as possible (or is as different from each other group as possible). The researcher is responsible for analyzing and naming the groupings. They may be classical, country western, rock, etc., or they may be “lots of talk,” “poor reception,” “music with words you can understand” and so on. The characteristics you have specified will largely define the clusters you discover.

Cluster analysis is most commonly used for classifying purchasers—most typically in segmentation research where we wish to classify the purchasers or users by attitudes and characteristics such as the benefits or product features each group needs.

Factor analysis.

Factor analysis is similar in some ways to cluster analysis—both are known as grouping techniques. However, cluster analysis groups individuals, while factor analysis groups characteristics or attributes. How many times have you been faced with a long list of detailed characteristics, many of which appear to be related, and you would just like to know what are the big three or four elements? Factor analysis can help.

What factor analysis does is look for patterns in the data to identify things that appear to be measuring the same underlying dimension. If we are willing to trade off some of the detail, we can reduce the complexity of the attributes. For example, consider a medical researcher who has tracked the following items across a variety of patients for many years:

Reaction time
Health of teeth and gums
Number of hairs per square inch on cranium
Skin tension/elasticity
White blood cell count
Body temperature
Glandular swelling

An analysis of these measurements would show high correlation among the first four characteristics—a decline in one is commonly associated with a decline in the other three. Similarly, there would be high correlation among the bottom three. We can look at these two groups and identify that the first items all tend to measure physical age, and the second tend to measure periodic disease. We say “tend” because in individual cases they may measure something else (glandular swelling is also a sign of puberty), but if we trade off this detail we can create an easier-to-understand categorization.

Knowing which attributes go together can be valuable for at least two reasons:

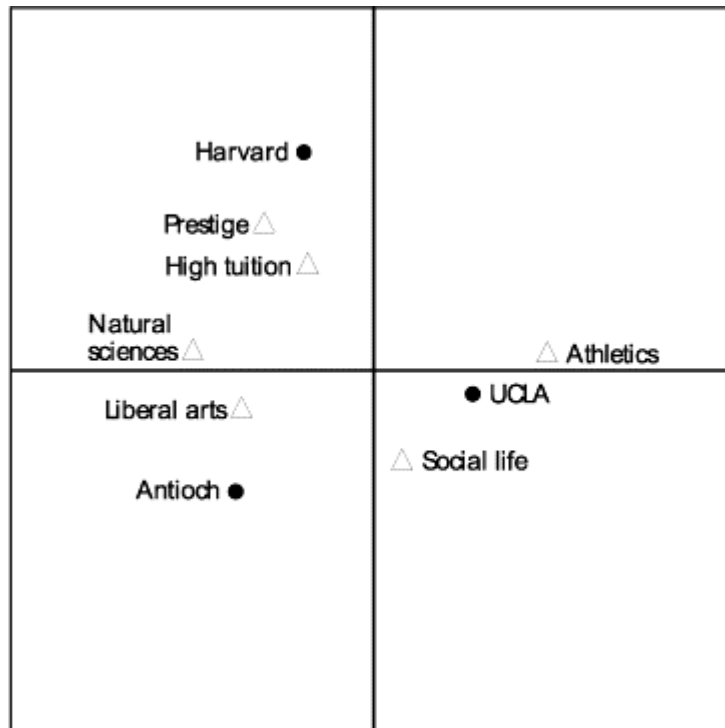
- **Clarifying the results.** We can group a long list of features into related categories and talk about each category separately. We can also identify underlying groups of characteristics that may be more informative than the characteristics are individually. For example, Japanese car companies have reduced more than 150 car needs to a handful of performance issues.
- **Simplifying the process.** Factor analysis can help us identify where we have a lot of items that measure the same basic thing, perhaps allowing us to quit measuring some of them. On the other hand, it points out items that do not appear to be related to any of the others. Factor analysis can show areas where we need to increase our measurements, or can point out an inaccurate measurement or question that needs to be reworded.

Perceptual mapping.

Perceptual mapping is another technique that trades off detail in order to allow us to grasp a large volume of data quickly and easily. What perceptual maps do is portray the major relationships among a set of subjects (such as brands) and a set of attributes (such as image characteristics). This portrayal takes place on a two-dimensional plot or “map.”

Since a major advantage of this technique is the visual representation it provides, we’ll use a visual example. This example was produced by a perceptual mapping technique known as correspondence analysis.

Figure 1.



While perceptual mapping can be a valuable communications tool, perceptual maps are commonly one of the most misinterpreted forms of analysis. A cumbersome explanation can diminish the perceived value of maps. Use caution.

However, when properly applied, perceptual maps are good for:

- **Identifying areas of market opportunity**—a space on the map where no competitor or product exists.
- **Determining your most similar competitors**—those brands or products closest to you on the map.
- **Graphically showing key strengths and weaknesses relative to the competition.**
- **Discovering dimensions of performance.**

Conjoint analysis.

Conjoint analysis is one of several approaches to “choice modeling” and is mathematically similar to perceptual mapping. Choice modeling refers to procedures that create a model of how consumers choose a product or service. Developing such a model allows us to say “What if...?” and examine the effect product changes have on the desirability of a product and on market share, even if we do not ask the respondent about these changes directly. Having a choice model makes the results more flexible and useful for a longer period of time.

Customers often have a hard time verbalizing what they would trade out, and rating scales rarely provide sufficient differentiation. Conjoint analysis gives better insights into the perceived values of attributes and how they compare.

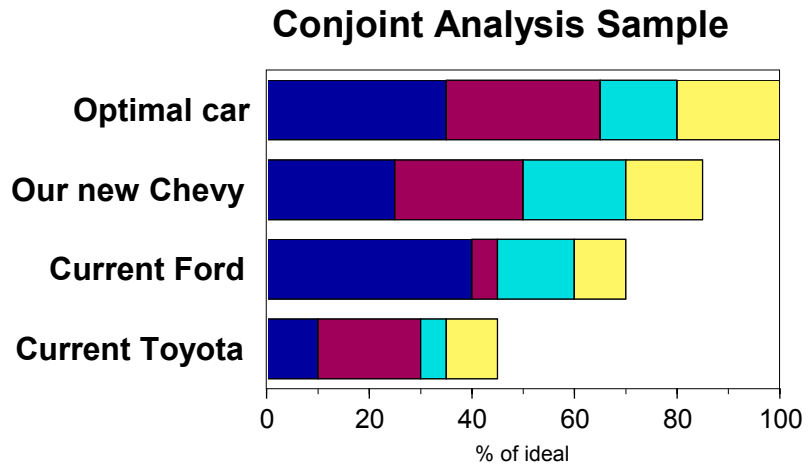
In most purchase processes customers make decisions regarding what type of product they want—what features it should have for the money it costs. Conjoint analysis replicates this process by having respondents make choices regarding which features they prefer. The researcher decides which features respondents consider in this mock decision process. These are usually features considered to be most important in the real world.

There are several ways the actual conjoint exercise can be conducted. Computer programs are available to facilitate the exercise. However, the final result from each approach is similar. At the end of the process, we have a number (known as a “utility value”) for each product feature included in

the exercise. This value is derived from the respondent's choices—the less willing the respondent was to give up a specific feature, the more important it is and the larger the value. By examining these values we can see how influential each feature is in the selection process.

With these values, we can model the choices each respondent would make if presented with several products. Using the purchase of a car as an example, consider each feature of the car as a block of wood. The utility value denotes the height of the block. Each product is made up of several of these blocks, one for each category of features. For example, there may be three choices for size of trunk and five choices for gasoline economy. Trunk size is a category of features (an “attribute” in conjoint lingo), and the specific trunk volume is a feature (or “attribute level”). Stack up the blocks associated with each feature for each product you want to compare. The product that has the tallest stack is the one with the greatest cumulative utility value. This is the product which would be preferred by that respondent.

Figure 2.



	Optimal car	Our new Chevy	Current Ford	Current Toyota
Make	Ford	Chevy	Ford	Toyota
Mileage	30 MPG	30 MPG	10 MPG	20 MPG
Price	\$10,000	\$10,000	\$10,000	\$20,000
Trunk	Large	Small	None	Large

Conjoint or feature trade-offs are useful for the following:

- **Pricing research.** Many use conjoint or similar techniques as a tool for determining price elasticity since the data collection process involves a simulated purchase process, and the relative values of product features are factored into the process.
- **Market simulations.** The utility values make it possible to create a set of competitive products and examine what effect product revisions or price changes have. The market share numbers usually cannot be expected to correspond perfectly to real-world shares since the effects of distribution channels and availability of information are not considered. However, the simulations are useful for examining general reactions and the relative strength of strategy changes. And since the utility values are calculated for each individual respondent, we can see which of several “feasible” products will provide the greatest market appeal.
- **New product development.** Because conjoint forces respondents to make trade-offs, it is an excellent tool for examining which features have the greatest value. This can be very useful at an early stage in the design process to give direction and establish priorities for the development. Conjoint is an excellent complement when conducting “concept test” focus groups.
- **Advertising themes.** Conjoint can also be used to isolate the “hot buttons” for feature-oriented ads and positioning strategies.
- **Market segmentation.** When used with cluster analysis, the conjoint utilities are often an effective way to identify natural segments in the market. For example, we can break out those who opt for a fully featured vs. a bare-bones product.

While there are numerous approaches to statistical analysis, these dozen or so are the basics.

V. GETTING STARTED

Planning to win.

Effective marketing is an ongoing dialogue with customers, users and purchasers. And, effective research is also an ongoing process that develops insight and wisdom over time. Projects build on each other and produce better results than quick fix, one-shot approaches.

If research plays *any* part in your marketing, then it's just good business to figure out how you are going to integrate different research steps to establish a foundation for informed decision-making.

The following are important questions to consider:

- Are we asking only the immediate tactical questions and ignoring strategic issues that may ultimately be more important?
- How does this year's research relate to what we did two years ago or to the information collected last month by another product group?
- Have we considered all the necessary marketing elements: awareness, preference, purchase and satisfaction? Product, price, position and promotion?
- How can we design the research projects to fit together, occur in sequence while avoiding unnecessary redundancy and making sure not to ignore important parts?

Research planning takes discipline and the willingness to put something down on paper. Don't create it in a vacuum. Work with your research partners to build the plan and make sure management understands and supports the process.

Don't hesitate to make the plan comprehensive. The goal is not to attain perfection but to have a guide, reduce waste and make the research you **do** count.

What to ask before you start.

If you're planning to conduct research, your mind is no doubt already full of unanswered questions. Allow us to suggest a few more things to consider:

- What are we trying to find out? Put words on paper and take a hard look at them. Pass them around and let others look at them. Get some agreement that these are your common objectives.
- Do we already have the answer? You'd be surprised how much is actually known about some markets and how the same questions pop up again and again. Someone else may have researched the question and be willing to share the findings. The first place to look is in your own company. Have you done market research before? What did it show? Even old research can help in the design and effective budgeting of new investigations.
- Industry studies can also focus your questions. And if you've used a research organization in the past, call them and ask for their insights.
- If we knew the answer would it affect our actions? Will this research be *actionable*? Will it help us get there quicker? Improve the bottom line? Create strategies and tactics that ensure our success? Or are we just looking for data to confirm what we already plan to do?
- Take the objectives you wrote earlier and describe what actions are likely to come from having answers. Who will carry out those actions? Who will fund them? These are the people you'll need to involve in the research process.
- Be realistic. Will we really take action to turn research conclusions into reality? Is adequate funding available? Do we have the teamwork and management agreement we need?
- Who needs to support the results? Be aware of all the players influencing the actions. Will the advertising agency be affected? Will we need senior management buy-in? (You almost always do.) If agreement and support are problems now, they'll be bigger and more expensive problems later.

A typical research process.

Of course, research requires innovation and creativity, but here are the stages most research projects go through:

1. Answer all the questions in the previous section.
2. Select your research partner. Apply the same type of criteria you use in selecting other corporate advisers—your lawyer and CPA. (Are they good golfers?)
3. Meet and discuss the project. Agree on methodology and research parameters.
4. The research company plans the project—including specifications, schedule and budget.
5. Review and approve the project.
6. Agree to budget and payment (half in advance and the balance on completion is common). For off-shore projects, it is customary to build in a contingency for currency fluctuations.
7. The research company designs the research tools (screener, questionnaire, discussion guide, etc.); you give input and approval. Pretesting (see Useful Market Research Terms section) may indicate design or budget changes. Be prepared to flex.
8. Begin scheduling the results presentation to guarantee good attendance from everyone who will need to understand and support the findings—top management especially.
9. The research company collects data, processes and analyzes.
10. The research company makes the presentation and distributes reports. Final billing.

Projects can range from a few days to several months. However, even fairly large projects in the domestic U.S. can usually be completed in 12 weeks, often in less than eight.

If you're thinking about international research.

The following is for U.S.-based firms doing research in other countries. Companies based elsewhere may have similar experiences researching U.S. markets. The good news is it's possible to do research just about anywhere in the world. The bad news is it takes extra care and money.

Social customs, processes, viewpoints, facilities, legalities, not to mention money and language, are all different and require patience, more time and creativity. As a rule of thumb, figure one and one-half to two times more expensive than in the U.S. and twice as long to complete.

Differences in Asian countries are obvious and significant, but cultural differences are still significant even in the supposedly united countries of the European Community. Even within the U.S., you would find strong differences on certain political or culinary topics, for example. Good research clarifies how these differences apply to your product and makes you culturally aware in targeting foreign markets.

Some other observations:

- Sending someone from your U.S. research company to supervise the beginning of the project and provide additional on-site supervision can help ensure findings are comparable.
- Mail-out and in-person interviews are more common methods outside the U.S. while Web interviewing has been adopted very inconsistently outside of North America.
- Technical or scientific markets may be more universal or Westernized than culturally driven consumer audiences.
- In-country researchers sometimes have self-imposed constraints and tend to respond reflexively. "You can't do it that way here." Sometimes they're right, sometimes not.
- Translations, both written and audio, vary widely in quality. Research questionnaires should be translated back into the native language for a final check, or at least reviewed by a second translator experienced with surveys. Transcripts can be produced in the U.S. and reviewed with the local researcher.

- When working with a local, in-country research supplier, don't assume *anything*. Question wording, respondent characteristics or other fundamental aspects of the research could be changed without your knowledge or approval. Iron out even the smallest details in writing.

Despite increased complexity, successful international research provides valuable marketing insights. The globalization of market research is beginning to reduce costs, ease barriers and heighten benefits. Most companies that start doing international research progress to doing more—they don't back-off in disappointment after their first experiences.

Useful market research terms.

Intention: To provide brief, easy definitions for some common and semi-common market research terms.

These terms, from abandoned survey to z-test, are some of the words market researchers use.

Abandoned survey/disconnect/termination/midway termination/partial—A partial survey where a respondent quits the survey process.

Acquiescent response set—A biasing condition that can be set up by a series of questions that beg a “yes” response.

Advertising development research—Investigations done prior to launching a campaign, to input the creative process. Usually help to define the audience and their interests.

Advertising effectiveness research—Most often research done to measure ad awareness and recall, as well as day-after recall. Pre- and post-advertising surveys are two common types.

Aided recall—A typical awareness measure. Also called “prompted recall.” Usually asked after unaided questions. “Have you ever heard of Microsoft as a provider of word processing software?”

Ambiguous question—One that implies multiple questions or could be answered correctly in at least two different ways.

ANOVA (ANalysis Of VAriance)—A statistical test used with interval data (see definition) to determine whether multiple samples come from populations with equal means. In other words, is there a statistically significant variance? Like chi-square, ANOVA tests for significant variation between groups or samples. However, ANOVA requires interval data and signifies differences in sample means.

Audit—A review of some specific aspects of a market such as products on store shelves to determine the number of facings and competitive mix or a complete advertising audit. Also a broad-based survey—such as a market audit—intended to determine a wide range of basic market facts about a product category.

Awareness—A basic marketing measure. Companies, brands, products, new concepts all must establish awareness prior to purchase.

Awareness and attitude research—A fundamental type of marketing research often used as a baseline for tracking companies' positions in the market. Measures awareness of the company and competitors and attitudes toward the company or product.

Banner point—The column or heading over a dataset in a multibannered computer cross-tab table. Vertical headings that describe data breakouts. For example: college grads, income over \$50,000, design engineers. Similar to a column on a spreadsheet.

Base, sample base, base over—The number over which percentages, averages or other findings are calculated. For example, positives or negatives about a specific company will often be based over those who are aware of the company. Often a subset of the entire sample.

Baseline—An initial research project against which future changes are benchmarked.

Benchmark—A tracking wave or survey designed to measure against the previous baseline. All repetitions of a given study after the first are benchmarks.

Benefit segmentation—Breaking out specific subsets of a population based on their needs or desires rather than on measurements such as industry sector or demographics.

Bias—The research equivalent of sin. Bias is any influence that has a negative impact on reliability or validity. Clients and researchers are constantly on the lookout for anything that can corrupt or “bias” data and lead to erroneous conclusions.

Bimodal distribution—Different from the familiar bell-shaped curve or normal distribution. Bimodal means that there are two modes of responding instead of having the data cluster around a central point. A bimodal distribution might be seen in a population where people either strongly prefer a product or strongly reject a product—half of the population might be rating the product 1-2-3 on a 10-point scale, and the other half of the population might be rating it 8-9-10.

Blind study—Research where the sponsor/client or some similar element is masked from respondents or researchers. In a double blind study, neither the respondent nor the researcher knows this element (such as which pill is the drug and which is the placebo).

Brand preference and awareness research—Studies conducted to determine the awareness of specific brands or companies and the degree to which the purchasing population prefers or doesn't prefer a specific product.

Briefing—Typically the process of orienting data collection personnel (interviewers) on a new project.

Build Your Ideal—A choice modeling method wherein participants construct their “ideal” product or service and then make trade-offs based upon realistic responses to price.

Call record sheets—A paper-and-pencil method of tracking results of calls made to homes or businesses. Not the actual survey but a record of terminations, those who were available, attempts, language barriers, refusal rates and reasons, and so forth. Becoming less common as CATI (see definition) and Web interviewing systems automate this record keeping.

Callback—Recontacting a respondent to clarify or verify survey information. Done to check quality, correct errors or expand an initial finding.

Categorical data—Responses that have no numeric relationship to one another. For example, categorizing respondents as brown-eyed, blue-eyed or green-eyed. Same as nominal data.

CAPI (computer-aided personal interviewing)—Similar to CATI using notebook computer or handheld device for the interview to record the results in a face-to-face setting. Respondents may self-complete sections of the survey.

CATI (computer-aided telephone interviewing)—Questionnaires are shown on a computer screen and the questioning is directed to some degree by computer. Results are usually entered directly into a computer database. Can be administered solely by computer, or computer can aid a human interviewer.

Cell—Often used to refer to a subset of a survey sample or experimental design. “Since there are only 10 males in the cell, the sample base is too small to draw a conclusion.”

Central location test (CLT)—Using a central site for conducting interviews. May either be a convenience sample such as traffic in a shopping mall or pre-recruited to specific criteria and invited to an interviewing location.

Central tendency, measures of—There are three basic indicators: mean or average, mode and median. See individual descriptions.

Chi-square—A test of statistical significance used for analyzing frequency distributions or contingency tables. See the “Practical Statistics” section for more description.

Clarify—An interviewing process used to improve the quality and clarity of data for open-ended questions. When interviewers clarify, they are asking the question, “Tell me more about what you meant by your response.” For example, “What exactly do you mean by high performance?”

Classification/classification questions—Demographics. Questions asking respondents’ characteristics such as age, income, household size, dollars spent in a product category and so forth. Typically occur later in a questionnaire.

Cleaning/data cleaning—The process of taking survey computer printouts and checking data for logical consistency or error—increasingly automated by computer. Also, dual entry of data and comparison of records to eliminate mistakes (validation).

Closed-ended—A question with a fixed response set, such as a rating scale or yes/no question, as opposed to an open-ended, free responding question where the respondent’s verbatim answers are recorded.

Cluster/cluster analysis—Techniques designed to classify individuals into a relatively small number of exclusive groups. A goal of cluster analysis is to maximize likeness within groups and differences between them to create an understandable topology for the market.

Codebook—A set of question responses and their associated computer code numbers. Used to assign categories to answers given to each question on a survey questionnaire.

Coding—The process of categorizing open-ended survey responses for computer analysis.

Completions—The number of valid, acceptable interviews completed to date.

Concept test—Research designed to investigate market responses to new ideas or their implementations.

Conclusions/recommendations/interpretations—Typically a separate section of a research report that gives the researchers’ subjective or experience-based perspectives on the findings separate from specific data results.

Confirmation—The process of affirming that recruited participants will show up. May involve phone calls and/or letters. Used for focus groups and other pre-recruited research.

Confirmation letter—A letter sent to respondents to confirm that they will attend the central location test, focus group or other research session.

Conjoint analysis—Sometimes called feature trade-off analysis. However, conjoint is a special type of trade-off analysis. A method for establishing respondents' utilities or evaluations based on the preferences they express for combinations of product attributes and features. Price is typically one of the attributes included. See Advanced Techniques section for more description.

Content analysis—The process of extracting and organizing the key elements from verbatim responses. Typically these responses are then coded and computer analyzed.

Control group—The opposite of the experimental group. They are kept separate from the group that receives some sort of experimental treatment and are used as a base against which changes can be measured or tested.

Co-op/co-op fee—Money or gifts given to respondents for their participation. A gratuity or honorarium.

Copy “testing”—Research to determine the degree of understanding, impact, awareness and believability that ad copy may generate.

Correspondence analysis—Maps categorical data such as “what one word comes to mind when you think of your mobile phone” type responses. Generally more flexible and easier on respondents than classic multidimensional scaling. See Advanced Technique section for more information.

Cost per interview/CPI—The dollar cost of completing an interview in a survey research project. Decreases as sample size increases since fixed costs are apportioned over more interviews.

Cross-tabulation—A typical technique used to display research data; similar to a spreadsheet. Used as a basis for analyzing most surveys. Cross-tabs normally sort responses by type (young, aware, heavy users) and display the results in a data matrix.

Data collection—Also called field work or interviewing. The process of actually collecting market research data.

Data entry—Entering survey data into a database so that it can be analyzed. May be done from a CATI terminal or entered from paper records and questionnaires.

Data privacy laws—Body of regulations which vary by country. Intended to protect the identity of respondents by providing anonymity. At minimum, requires that the respondent's identifying information not be passed on to clients by the research agency unless permission is specifically granted by the respondent.

Demand bias—Research corruption created when respondents know or suspect that researchers have a particular agenda. One example of demand bias is the effect of knowing who is sponsoring the research. Generally demand bias is to be avoided.

Demographics—The characteristics of respondents participating in research. Typical examples include age, income, sex and so forth.

Depth interview—A form of qualitative research. Typically trades out sample size for delving deeper into the subject matter. Used to determine underlying causes and motivations.

Descriptive data analysis—As opposed to statistical testing and modeling. Observing findings, data distributions and relationships between data without applying statistical tests. Reporting and summarizing on these observed findings.

Diadic—Paired or face-to-face. An example of a diadic design would be a paired comparison taste test where two versions of a new french fry might be tested against each other, as opposed to monadic where one version of the french fry would be tested independently of any comparison.

Diary—The record kept by a respondent of purchase behavior, likes and dislikes and so forth, over a period of time. Typically diaries are a product of research panels that create them.

Dichotomous question—A question that has only two possible responses. An example might be, "Will you vote for Candidate A or Candidate B?"

Discussion guide—Typically five to 10 pages of questions used in a focus group. The questions proceed in an order designed to maximize the effectiveness of the discussion, but with flexibility to adapt to unanticipated findings or group dynamics. Discussion guide design is usually worked out between the researchers and the client prior to conducting group discussions.

Disk-by-mail—A research technique where a self-prompting questionnaire is sent to respondents on floppy disk. Respondents use the disk to answer the survey on their computer and then send the completed disk back to the researchers. Popularity has been limited of late because of virus concerns.

Distribution—The pattern and frequency of responses to a given question.

DK—Common research shorthand for “don’t know.” The response participants give when they don’t have any other answer.

Door-to-door interviewing—The older practice of going into neighborhoods and to individuals’ homes to interview them in some sort of systematic fashion. The Gallup Poll was originally conducted in respondents’ homes. Still the most viable method of research in some countries.

Double barreled question—Example: “On a scale of one to five, how do you rate Company A’s sales reps on their friendliness and knowledge of the product line?” The respondent may have very different impressions of the rep’s friendliness and knowledge—on which attribute should the rating be based?

Drawing a sample—The process of determining in a random or systematic fashion who will be candidates to participate in research.

Dual moderator focus group—A technique using two researchers to conduct group interviews. Typically used for complex or difficult topics to provide greater depth, breadth and quality of information.

Eager (or willing) respondents—The market research equivalent of groupies. People who are repeatedly willing to participate in research. Normally to be avoided because eager respondents may tend to become “experts” or give atypical responses.

Early adopter—Also called innovators. Those people who tend to try new ideas or products early in the adoption cycle. Frequently a target for research since they often set the tone for later behavior in the marketplace.

Editing—The review of completed questionnaire responses prior to coding and entering them into a database. A quality control check to make certain that all questions are answered and questionnaire logic has been followed.

Ethnographic research—A form of research where the researchers spend a great deal of time with the research subjects, often living with and even participating in activities with the subjects, in order to gain a firsthand, detailed, natural understanding of the subject population.

Evoked set—The set of choices that are salient or kept in mind for purchase. For example, from the multitude available on the market, the evoked set is the two or three brands the buyer may remember easily and be likely to consider for purchase.

Exhibit cards—Cards given to respondents to aid them in answering a question or making a choice. Cards may list choices or provide a trigger to elicit response.

Experimental design—Research designed to follow classic laboratory or experimental techniques. Normally consisting of a control group that does not receive the experimental treatment and one or more experimental groups that do. The underlying assumption is that if the experimental treatment has an effect, there will be a statistically significant difference in the experimental group when compared to the control.

Exploratory research—Research typically conducted early in a research program. Designed to uncover basic viewpoints, perceptions, behaviors, attitudes and so forth in a marketplace. Intended either to produce results that may be actionable or to lead to additional research.

Face validity—Acceptance of a measure or technique simply on the basis of whether it appears to be valid.

Factor analysis—A data reduction technique intended to categorize the range of characteristics or findings to reveal their underlying structure, dimensions or factors. See Advanced Techniques section for more explanation.

Feasibility study—Typically research done early in the process to determine the likelihood some new concept, product or idea may have potential. Often similar to exploratory research.

Field edit—The process of editing questionnaires as they are collected, typically on a paper-and-pencil survey. Done by a supervisor, the clerical staff or the interviewers themselves.

Field research or field work—Also referred to as data collection or interviewing. The process of collecting the data used in market research. To “field” is to put a research project into the data collection phase.

Field service—A supplier of data collection services.

Field supervisor—Typically the person who is charged with managing and ensuring the quality of the data collection process.

Focus group research—A research discussion composed of (typically) six to 12 participants, directed by one or two moderators for the purpose of developing a group interaction around the topics of interest. Typically conducted in a focus group facility equipped with a one-way mirror for observation and videorecording capabilities.

Funnel design or funnel sequencing—The design of questionnaires in a manner that narrows questions/topics down from the more general and unaided to the more detailed, specific or aided areas of investigation. Typically considered to be one aspect of questionnaire design quality.

Halo effect—The product of a dominant reputation on an unrelated topic. For example, a manufacturer well-known in a product category may be perceived to have a presence in a product area in which it doesn't actually compete.

Hand/manual tab/tabulation—The process of enumerating survey responses by counting as opposed to using computer automation.

Hawthorne effect—The phenomenon of behavior changing simply by being observed. Typically considered to be a bias that can be introduced by conducting research.

Honorarium—Same as co-op fee.

Hypothesis—Operational guesses being tested or examined for truth by research.

Image/reputation—The perceptions in the marketplace about a brand, company, concept and so forth.

Incidence—The occurrence of a behavior in the population. For example, the incidence of personal computer users in the population at large may be 20%. Frequently incidence has a strong effect on the cost of conducting research. Low incidence research is usually more expensive.

Industrial or business-to-business research—Investigations involving commercial enterprises, selling one to the other, as opposed to consumer marketing research.

In-home placement—A research technique requiring repeated use and experience with a consumer product under investigation. Typically conducted under natural conditions—"in-home." Can also be done with business products.

Interaction—The effect two variables may have on each other that does not occur independently. Increasing heat and humidity will have an effect on perspiration different from increasing either one alone.

Intercept—The process of approaching customer foot traffic, asking screening questions and including qualified respondents in a research interview.

Interval data—Responses having a known, fixed distance from each other. A ruler with infinitely small divisions is the perfect tool for collecting interval data. See “nominal” and “ordinal” data for contrast.

Item non-response—The “don’t knows” or “refusals” related to specific questions on a survey.

Language barrier—Situation in which the respondent contacted does not speak the same language as the interviewer. May be recorded as “uninterviewable” or scheduled for interview by another interviewer. Can be a problem with Web surveys where lack of translation or poor translation can affect or limit responses.

Leading question—One which begs or influences a specific response as opposed to an objective or well-designed question.

List rotation—The process of randomizing the starting point when reading a survey list. Intended to minimize the effect of list order bias.

List order bias—The learning effect originally described by Ebbinghaus. People are generally inclined to remember or focus more on list items at the beginning and end—less on the middle items on a list.

Longitudinal research—Research tracking attitudes, viewpoints, behaviors and so forth over a period of time.

Mail/mail-out questionnaires—Surveys sent to respondents through the mail, which they fill out and return to the research organization.

Mall intercept—The research process of interviewing traffic in shopping malls where customers are available to participate. Many malls have field research companies on the premises.

Marginal—An early, partial computer run used to examine the basic frequency distributions in the data. Often used to help determine appropriate banner points for cross-tabulation and as part of the data cleaning process.

Market research—Linking the customer, consumer and public with the marketer through information that is used to identify and define marketing opportunities and problems. Market research generates, refines and evaluates marketing actions, monitors marketing performance and improves the understanding of marketing. Market research specifies the information required to address issues, designs the methods for collecting information and manages and implements data collection, analyzes results, communicates the findings and their implications.

Market share—That portion of the market purchasing a particular brand, supplier or company. For example, Microsoft has an 80% market share in word processing programs for the Macintosh.

Market simulation—The research technique of statistically modeling an actual market situation. Variables are controlled and the effects of a new product introduction, advertising, pricing changes and so forth can be measured in an experimental environment. To the degree possible this environment simulates the test market situation or the actual situation of a market over time.

Mean—One measure of central tendency. The numerical average.

Median—Another measure of central tendency, the response in the middle. If there are 19 responses, the median response is the tenth one from either end.

Mode—Another measure of central tendency. The most common response.

Moderator—A person or persons asking questions and directing the discussion in a focus group. Also referred to as facilitator.

Monadic—A design in which a single product or concept is exposed to the respondent, as opposed to diadic in which two options or new products might be proposed or triadic in which three would be compared to each other.

Monitoring—The process of listening in, coaching and managing interviewers as they collect data on the phone.

Multiclient study—Research designed to provide data and analysis to a set of companies with similar information needs. Differs from an omnibus in that the purpose is to share research on a common topic. Each sponsor may have some “private” questions but they are the minority of the survey effort.

Multiple mentions—A question where more than one response is recorded per respondent.

NA/not applicable/not answerable—Questions for which there is no response given because the question does not apply to the respondent. One element of item non-response.

Natural observation—The technique of conducting research in the most unobtrusive way possible. One example might be observing shopping behavior in stores without directly asking questions of shoppers.

Nominal data—Responses that have no numeric relationship to one another. For example, categorizing respondents as brown-eyed, blue-eyed or green-eyed. Same as categorical data.

Non-response bias—The effect of a set of respondents refusing or choosing not to participate in research. Typically larger for self-administered or mail-out surveys.

Normal distribution—A bell-shaped curve or tendency of responses to distribute themselves around a central point. An underlying basis for many forms of statistical tests comparing central tendency.

Not-at-home—A record of a contact. Attempting to conduct an interview in which no respondent was available at the location.

Observers—Typically clients. Those who have an opportunity to watch and listen to focus group research.

Omnibus survey—Also called piggyback survey. Research in which multiple clients share the cost of conducting research. Subscribers typically receive the portion of the information that is collected specifically for them.

One-way mirror—The mirrors used in focus group facilities. One way they are a mirror and the other way a window to allow observation of groups.

Open-ended—As in open-ended questions. Those questions that allow respondents to verbalize reactions in their own words. Contrast with closed-ended.

Ordinal data—Findings that can be categorized as greater than or less than. Cannot be referred to as twice as large, half the size or some similar mathematical comparison as can interval or ratio data. For example, ranking toothpastes from most to least desirable would be a way of creating an ordinal scale or ordinal data.

Outlier—Atypical data occurring at the tails of a normal distribution. Frequently outliers are removed to minimize their effects. For example, in research where 300 interviews are conducted and 299 respondents buy less than five times a week, the one respondent who is purchasing 30 times a week may be removed to suppress his excessive weight in measures of central tendency such as means or averages.

Paired comparison—When two products, concepts or candidates are tested head to head. Typically serving order or comparison order is rotated to avoid first order bias.

Pantry check—A type of audit. The process of either looking in or asking a respondent to look in the refrigerator or pantry to determine brands or products currently on hand, as opposed to depending on the respondent's recollections. Eliminates pressure to say "I drink microbrews" when the refrigerator is full of Bud. In business settings, a variant is to audit installed base of equipment or brands of supplies in the storeroom.

Participants—Typically used to describe those who attend or contribute to focus group or face-to-face discussions. Same as respondent.

Penetration/market penetration—Frequently used in market surveys as a measure of use, market share or dominance. The degree to which a product is used, experienced or known by a population.

Phone-mail-phone (also phone-fax-phone)—A technique of calling and qualifying respondents, then sending them a questionnaire that might be lengthy or cumbersome by phone. When they've had a chance to complete the questionnaire, they are called back and their information is collected over the phone. Being replaced by pre-recruited Web surveys.

Piggy-back—Also referred to as omnibus. Survey shared by multiple clients. Subscribers get their data inexpensively by sharing the fixed survey costs.

Placement—To give a respondent a product or service to use for a specified time. Usually followed by a phone call or visit to gather reactions to the product and usage data.

Plus one dialing—Typically the process of adding one to a number selected at random from directories. Used to include unlisted numbers in the sample. Also called raised integer dialing. Modern list sources largely eliminate this practice.

Poll—Term most often used to describe a survey for political research in which the electorates' likely behavior is investigated. Often asks "horse race" type questions about candidates or ballot measures.

Population—Any complete group sharing some common set of characteristics. Samples are drawn from populations. For example, we may draw a sample of grocery shoppers from the population of all grocery shoppers. Usually considered synonymous with “universe.”

Pre-coding—The process of determining and appending computer codes to questionnaire responses prior to conducting interviews. Used to accelerate data processing for paper-and-pencil or computer-aided interviewing.

Predictive dialing—A computer technique for finding working telephone numbers where a respondent is available to be interviewed. “Predicts” when an interviewer (or telemarketer) is going to be available and dials in advance. Used to increase interviewing efficiency. However, the practice results in large numbers of dropped calls where the target answers the phone to find no one is there.

Pre-recruit—Individuals are contacted by phone or in person to participate in research scheduled for a future date, such as a focus group or central location test.

Presentation—Typically the final step in the research process when results, conclusions and interpretations are presented to the research sponsor.

Pretest—Interviews conducted to determine the effectiveness of the questionnaire design and finalize the budget.

Primary data—Information collected directly from a respondent population as opposed to secondary or published data.

Probing—When asking open-ended questions, the process of requesting additional responses. Asking “what else?” Not the same as clarifying which asks respondents to expand a previous response.

Prompting—Also referred to as aiding. The process of reading lists or names and asking if a respondent now recalls having heard of the brand, company, etc.

Psychographics—Lifestyle investigations. VALS is an example of psychographic research. Used to segment markets based on values, attitudes and lifestyles rather than product benefits or direct needs.

Qualifying/qualifying questions—Questions used to find those who have the characteristics required to participate or give responses for the research.

Qualitative data—Findings that are not projectable to the population as a whole. Verbatim responses or results from focus groups are good examples of qualitative data.

Quantitative data—Any result that is inherently numerical and usually projectable to the population.

Quota—The number and kind of respondent from whom completed interviews must be obtained in order to satisfy the requirements of a study. For example: 100 design engineers, 100 engineering managers and 100 purchasing agents might be the three quotas necessary to complete a 300-respondent engineering market study.

Random digit dialing or RDD—Using a computer and algorithms about phone exchanges to generate a truly random, non-directory-based sample.

Ranking—Putting in order from most to least or least to most without regard to the specific size of the interval between ranked items.

Rating—The process of having respondents assign specific values to the characteristics. For example: “On a scale from one to 10, rate the importance of ease of use.”

Recruiting—The process of qualifying and inviting research participants. Typically used for pre-recruited central location tests and focus groups.

Referral—Asking others to name potentially qualified respondents who can be contacted to participate in research.

Refusals—Respondents who choose not to participate in research.

Reliability—The similarity of results provided by independent but comparable measures of the same characteristic. For example, one measure of reliability would be splitting a sample in half and comparing the results, one to the other.

Research design—The stated structure and process of conducting a research project. Typically includes specifications, schedule and budget.

Research methods—How the research is conducted. Also, a section in a research report detailing the process. At minimum, should allow for replication of the project.

Research proposal/recommendation—The document describing the design, schedule and budget for conducting a research project.

Research specifications—Design characteristics of proposed research.

Respondents—Those who participate in research.

Response rate—The percentage of potential respondents with whom completed questionnaires are accomplished. Examples: The “return rate” of mailed-out questionnaires. The percentage of qualified computer users called who finish the interview. Typically, ineligible members of the sample are excluded from the denominator.

Sample—The group of respondents derived from a population. Analogous to a spoonful of soup compared to the pot. The size of the spoon and the consistency (or heterogeneity) of the soup will affect how well the spoonful represents all the ingredients in the soup.

Sample size—The number of elements (names or phone numbers) drawn from the population. Also, the number of completed interviews analyzed.

Sampling—The process of selecting subjects from the population or universe for inclusion in research. Following are common sampling methods:

Census—When all members of a target population are included or surveyed.

Cluster sample—Samples are drawn in a cluster and a researcher collects information from that cluster, often used to reduce costs. Example: Sales districts are randomly chosen and then buyers within the chosen district, are interviewed.

Convenience sample—Typically a research sample that is relatively easy to acquire but is not a valid representation of the population. Common convenience samples are student populations, co-workers and online polls. Lower cost and lack of need for extreme rigor are often good motivations for using convenience samples.

Disproportionate stratified sample—Appropriate method when certain segments of a population are seen as more important than others, as having higher variability, or as more expensive to sample. For example, a health insurance company surveys its corporate customers, oversampling from firms with larger memberships to reflect their true influence.

Judgment or purposive sample—Non-probability sampling method used when a target population is judged to be like the true population. Most effective for exploratory research, this method is often used to pretest a survey or develop a focus group discussion guide.

Non-probability sample—Any sample where the likelihood of a particular element or characteristic being included cannot be determined. Since there is no way to ensure the sample is representative, statements to that effect are inappropriate.

Probability sample—A sample in which each population element has an equal and known opportunity to be included. This permits statements of sampling error and estimates of precision. Also referred to as a random sample.

Proportionate stratified sample—Sample is selected so that each stratum is in proportion to the actual occurrence. If 25% of registered voters live in a particular county, the final sample would contain 25% from that county.

Random/random sample—The process of ensuring there is no systematic bias in the way potential respondents are selected for inclusion in the research.

Snowball sample—Normally used for hard-to-find populations. Initial respondents have been selected through a particular sampling method and “referrals” are recruited during the interview. For example, if you wish to interview individuals whose hobby is quilting, you may ask for referrals to other people who quilt.

Stratified sample—A two-step process. A probability sample where the initial population is divided into unique subsets. Each is then randomly sampled. Quotas may be set.

Systematic random sample—This probability sample is obtained by beginning at a random starting point and then selecting every *n*th entry. Often used with paper-based lists, care must be taken so the interval and the order of the list do not create unanticipated problems (e.g., the entire sample is drawn from people whose last name begins with x, y or z).

Sampling error—An estimate of the variation that could occur when drawing multiple samples of a given size from a population of a given size.

Sampling frame—A procedure or a list of elements (cities, institutions, individuals, etc.) from which the sample will be drawn. A sampling frame for potential customers may be subscription lists from the four most widely read computer magazines, plus a list from Hewlett-Packard of people who have inquired about high-volume laser printers in the past 12 months.

Scales—A series of graded values used to measure responses. Following are common types:

Agree/disagree scale—A common variation of a bipolar scale. Extreme opposite labels are applied, such as “disagree strongly” at one end and “agree strongly” at the other. Respondents are asked to indicate their level of agreement with the given statement.

Bipolar adjective scale—Labels of opposite meaning are only attached to the two extreme ends of the scale. This scale generates interval-level data by forcing respondents to look at the numbered points as equal widths.

Binary scale—Nominal measurements that only have two possible values. Do you own a car: yes or no?

Comparative scale—Measurement that requires the respondent to make a series of relative or comparative judgments rather than a series of independent ones.

Constant sum scale—Popular ratio scale where respondents are asked to divide a specific number of points among a smaller number of alternatives according to a set criteria (e.g., preference, importance, aesthetic appeal). Multiple points are given to alternatives most preferred.

Direct qualification—Respondent is asked a question requiring a direct number or ratio answer. For example, how many printers do you have in your division?

Dollar metric (graded paired comparison) scale—An interval scale used to collect paired preference plus the monetary value by which it is preferred. The scale pairs two products and asks for respondents’ preference. Once the decision is made, respondents are asked how much extra they would pay to get their preference. Results can be used to suggest market preference for each brand, but cannot provide a direct representation of actual market strength or share.

Equal width interval scale—Respondents are asked to indicate which category they fit into using a scale that usually has four to eight divisions of equal distance. When the interval between categories becomes unequal (0, 1–2, 3–15, 16–99, etc.), the data falls to ordinal level.

Forced ranking scale—Ordinal scale where respondents are asked to rank objects or things. Often used to learn order of attitudes or preferences; however, does not measure strength of preference. Example: Please rank the following seven brands in terms of your preference, with 1 being most preferred.

Interval scale—A numeric scale where the extent of difference between any two points is a legitimate basis of comparison. However, the ratio between values is meaningless and zero is an arbitrary point on the scale. In addition to nominal and ordinal level, calculations can determine means and standard deviations. Good scale for measuring such things as attitudes or preferences.

Likert summated scale—Used for gauging attitudes toward the thing being measured. All points on the scale are labeled, and the respondent is asked several related questions; then a total score is calculated. A Likert scale might look like: *dislike strongly (-2), dislike (-1), neutral (0), like (+1), like strongly (+2)*.

Metric scale—A ratio or interval scale.

Multiple choice scale—Frequently used to collect demographic information. The respondent is read a list of choices and asked to select the option that best fits.

Multidimensional scale—Measurement technique where respondents' perceptions of the similarity of objects and their preferences among these objects are measured. The relationships are then plotted in multidimensional space and displayed on two-dimensional maps. One of several mapping routines.

Nominal scale—A scale where the numbers are used solely to identify the object. For instance, 1=IBM, 2=Oki Data, 3=HP. Only good for calculating frequencies.

Non-metric scale—Refers to nominal or ordinal measurement scales.

Ordinal scale—Measurement where the assigned numbers imply some ordering of the objects (less than to greater than). Example: Respondents are confronted with 10 factors and asked to rank them in order of importance when selecting a color copier. Can calculate frequencies, medians and percentiles.

Paired comparison scale—Respondents consider their preferences, two alternatives at a time. The advantage of this measurement is that each individual decision is made as simple as possible. The downside is that this scale can become quite unwieldy—15 products generate 105 paired comparisons.

Ratio scale—A scale that encompasses order, a constant unit of measurement and an absolute zero. Examples are scales for reporting length, weight or number of objects. Can perform all statistics of lower-level scales, plus coefficient of variation.

Reference alternative scale—Also called a fractionation or magnitude scale, this ratio scale has respondents compare to a reference alternative (X) while applying a given criteria. Example: If X=\$100, how much would you pay for A, B and C?

Semantic differential scale—Respondents are asked to indicate a response on a scale between two opposing terms, e.g., futuristic and traditional. There are usually five or seven points between the terms and they can be labeled with text, with numbers or be blank. While ordinal, these scales are generally seen to meet requirements for many types of numeric data analysis.

Screener—The questionnaire used to qualify and recruit participants for focus group research.

Screening—The process of contacting, qualifying and inviting respondents to participate in additional research.

Secondary data—Any information collected from intermediate sources. Industry figures, databases, library sources and so forth are examples of secondary data.

Segmentation—Splitting up a population into subsets based on common characteristics. An a priori segmentation splits the sample based on known characteristics that are measured. Typical examples are age, income, industry sector and so forth. A post hoc segmentation will be driven by analysis of the data using some form of clustering analysis.

Selective perception—A biasing effect common to all observation. The process of observing only part of the pertinent data available for analysis. Selective perception may cause focus group observers to develop a set of beliefs based on only part of the information.

Self-administered questionnaire—A questionnaire not administered by an interviewer. An instrument the respondent fills out on paper, via disk or via the Web.

Sign-off—The form used to check out respondents as they leave focus groups. Verifies they have received payment and agreed to protect confidentiality.

Simulation—See also market simulation. A replication of market conditions to allow drawing conclusions about what is likely to happen under the conditions created in the simulation environment.

Skew—A non-symmetrical distribution. If, for example, most respondents on a 10-point scale rated the product a 9 or 10, we would describe that distribution as “skewed.”

Skip pattern—The logical organization of an interview so questions are asked only of those who fit certain criteria. Other respondents are directed elsewhere in the questionnaire depending on the criteria they meet.

Sponsor—The client or organization paying for the research.

Statistical test—Measures of significance applied to data collected using probability sampling. Used to determine if the null hypothesis (that there is no difference between measures or groups) may be rejected and in fact there is some reliable difference between two sets of data.

SUGGING (selling under the guise of research)—Pretending to conduct market research for the purpose of selling goods or services. A highly unethical practice and one that undermines respondent cooperation for future research.

Syndicated research—Research with multiple sponsors, or research sold to multiple audiences.

Tab or code and tab—The process of tabulating or calculating survey responses. Can be done manually, by computer or a combination of both.

Terminate/midway term—Interviews in which the respondent chooses not to complete the interview and is unwilling to continue with the process.

Test market—A clearly identified town, geographic region or controlled venue in which a new or improved product or change in marketing elements is tested to see if in fact the new approach is viable for introduction across a wider area.

Test product—Any new or existing product being included in the research process.

Theoretical error—Also called sample reliability. An estimate of the difference between survey results on a specific variable and the long-run mean of that variable if the entire population were measured. The typical standard in research is a 95% confidence level, where in 95 of 100 samples we are sure the true mean falls within the stated range. For instance, suppose a stated 95% confidence interval from a sample of 200 is plus or minus 4%. This means that if we repeatedly draw samples of 200 from the given “universe,” on 95 out of 100 occasions, we would not expect results to vary by more than plus or minus four percentage points from the results shown.

Top-of-mind awareness (also called “tip-of-the-tongue”)—First mentioned recall of vendor names, brands, products, ideas, services, etc.

Total unaided recall—All recalls or mentions a respondent can volunteer, when asked to identify a brand, company, message and so forth.

Tracking study—Research that repeatedly measures the same variables and determines their changes over time.

Transcript—The verbatim or nearly verbatim accounting of respondent comments in personal interviews or focus groups.

Triadic—A design for three-part product or concept comparison. See also monadic and diadic.

Trimming—One method for removing the effect of outliers on the average.

T-test—A statistical test comparing the distribution of two means for the purpose of determining whether they are significantly different, one from the other.

Universe—The entire group about which some information is desired and obtained through a sample. Usually considered synonymous with “population.”

Validity—The extent to which research actually measures what it says it does.

Variance (S^2)—The degree to which data is distributed away from or varies from the center or mean. Related measures are standard deviation, standard error and “product moments.”

Verbatim—Respondents’ true and actual verbalizations.

Verification—(1) The process of determining whether or not respondents did give the answers recorded on a questionnaire. Typically, response verification is accomplished by calling back a subset of the sample. (2) List verification: The process of cleaning and completing lists such as customer or mailing lists.

Verified data—Data entered into a computer database multiple times as a way of ensuring accuracy of entry. “Verifying 100%” means dual entry of all responses and comparing both datasets for anomalies.

Wave—An instance of a tracking study. Multiple waves are conducted over time.

Weighting—A process of increasing or decreasing data by the proportion of segments in a sample or by a known multiplier. Often used to “fix” a non-representative sample. Usually done by computer.

Z-test—A statistical test of the central tendency of two percentages or means to determine where they are significantly different from each other. When the sample is larger than 30 respondents, z-tests and t-tests are identical.

If you have more questions or would like a complimentary copy of the hardbound *Gartner Market Research Primer*, please call us at +1-503-241-8036.