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Online survey techniques: Current issues and future trends

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Abstract

Online surveys have already made a significant impact on research in the USA. However, in Europe and elsewhere in the world they have not. This paper discusses the reasons for this divide and the many issues surrounding online panels and website interviewing. It also covers online qualitative methods, and suggests that these may never become as mainstream as the quantitative methods (in Europe at least). It reviews areas where online research is likely to make a major impact and discusses potential future developments.

Introduction to online surveys

Some of the first online surveys^{1,2} were conducted in the early 1990s by academics and took the form of e-mail surveys. These suggested that the main benefits of online research were the potential to deliver results much more quickly and cheaply than conventional research. For example, they quoted obtaining survey results in two to three days rather than two to three weeks (as when conducted traditionally). They also suggested that there might be some quality benefit in terms of better (more) answers to open-ended questions. However, these studies also pointed out that there did seem to be a trade-off in terms of response rate. Online surveys were often filled out by fewer people than conventional ones. Commercial surveys soon followed^{3,4} that confirmed these findings and set the stage for a massive expansion of online research that started to take place in the late 1990s.

A lot of the initial work concerned tests to confirm the validity of online research. The findings of these were somewhat mixed, with a number of surveys showing differences between online and offline methods. However, in retrospect, this was probably because they chose as a survey subject things related to IT or the Internet. Not surprisingly, there did turn out to be a difference in attitudes towards IT if you happened to sample online the early adopters of the Internet versus an offline sample who were Internet rejectors.

However, researchers soon realised that if they researched topics uncorrelated to the method of data collection (eg consumer goods) the results were remarkably similar between online and offline. A major breakthrough was probably the publication by Infratest Burke⁵ of the results of 50 online validations of their conventional BASES market potential tests. In 1998, the company recruited a panel of 6,000 online US citizens and parallel tested concept tests from a wide range of food, household and personal care products. The results were amazingly close,

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with correlations between 0.84 and 0.95 on all key measures. They also confirmed the usual online benefits of speed, cost and quality (of open-ended questions).

At the same time, the dot.com boom was reaching its height and the world had money to invest in all things that might revolutionise life as we knew it. The key way that research benefited from this was the ability (in the USA, at least) to set up large panels of people to take part in surveys. The rest, as they say, is history. Or at least it might have been, but the bubble burst and reality set in before such panels could get set up around the world; currently seriously sized ones only exist in the USA.

Added to this was also the problem with the small number of Internet users in many European countries, which meant that it was just not cost effective to create panels. This problem has been compounded by different languages, cultures and laws that made running a true pan-European panel very difficult and expensive — see the detailed discussion later for more on panel problems.

It is mainly for these reasons that today we have a two-tier online research world, with many companies in the USA having already adopted it and the rest of the world wondering how they will ever catch up. Some of the statistics⁶ from the USA are staggering on how quickly things have changed. For example General Mills⁷ conducted all its research offline in 1999 and by 2001 had switched nearly 80 per cent to online.

If you look closely at the General Mills data you will notice another reason why adoption was so quick in the USA versus other places such as Europe. The starting point was very different. Many US companies had been conducting the bulk of their research either using mall testing or postal panels. Interview rates in malls had declined during the 1990s from 30 a day to sometimes as low as just five. In addition, the postal panels

Conversion of the USA online

Figure 1: Changes in General Mills research, 1999–2001

Europe is different

were very slow to deliver results, quite costly to administer and had potentially marked demographic (or at least psychographic) skews in their members. Therefore when the Internet arrived offering them 'faster, cheaper, better' research, it was not a difficult decision to adopt it.

The same parallel does not exist in Europe, though. In contrast, much of the research conducted in Europe is perceived to be higher-quality face-to-face or telephone interviewing. Panels have traditionally been associated with poor-quality research and most research buyers are very reticent to switch towards any method that they regard as being potentially inferior.

This has also been compounded by a number of other issues. Firstly data protection laws are under review and some European countries (eg Austria, Denmark, Finland, Italy and Germany) have banned unsolicited commercial e-mails. Although market research can often find its way around such laws, it does not help either response rates or the willingness of buyers to adopt the method.

The final reason for lower adoption probably lies with research agencies themselves, which have sometimes put in higher costs for conducting online research than even conventional research, in spite of the fieldwork cost savings. This has been driven partly by each department within the agency wanting to build in premiums for dealing with the (unknown and potentially time-consuming) media and partly the actual high costs of running online panels.

General research online

The main problem with doing conventional research online has always been sample. With the exception of conducting some customer satisfaction surveys, there is no (and never will be) perfect e-mail database to sample from. Although many e-mail lists exist, few offer a viable solution to market researchers. The result is that most agencies have set up strategies to build online panels of people willing to take part in surveys.

Much information is stored on panellists. This not only includes demographics but also purchasing behaviour. This makes it very easy and simple to sample target groups for surveys. Moreover, the panel approach means that large numbers of potential respondents can be contacted by e-mail very quickly and asked to click on a link to participate in online surveys. (Note this is typical method rather than conducting the whole interview by e-mail.)

Table 1: Summary of reasons why adoption of Internet research has been lower in Europe

- Lower Internet penetration rates
- Greater data protection concerns
- Different starting points (eg mail panels versus face to face)
- Europe more risk adverse
- Agencies not delivering cost savings
- Fewer sample source options
- Smaller size of most European markets (and lack of common language)
- Cultural and linguistic differences between countries.
- Lack of major investments (missed dot.com boom)

In the USA, companies such as Greenfield Online and AOL OpinionPlace have access to many millions of such panellists. Other companies (eg InsightExpress) have developed online systems on the back of such panels where the research buyers can type in their questions, select their sample definition and sample size, pay their \$1,000 by credit card and the next day the results are e-mailed to them.

As mentioned in the introduction, such large panels do not exist in Europe or elsewhere in the world. For an online panel to be usable for repeated studies by a client, it probably needs to have at least 100,000 members within a country (and ideally more like the millions that exist in the USA). If you have anything less, it means you will end up interviewing the same people all the time on your projects. This is a particularly acute problem if you are seeking to interview groups that are not well represented on the Internet.

One particular group that causes problems for most panels is older women. This is because Internet demographics are becoming biased towards younger women and older men. (Indeed in many website visitor surveys conducted nowadays, women outnumber men among under-25s, with quite the reverse amongst over-45s.) Moreover very few Internet users, of either sex, are aged over 55 in Europe. However, in many conventional surveys, it is necessary for over a third of the sample to be women aged over 55. This specific target group just does not exist in any great numbers online (and may not do so for a number of years).

One particular problem that panels have in Europe is the inability to establish anything like enough members to make them viable. Take a country like Austria as an example. It has a population of about 8 million and about 50 per cent Internet usage. There are therefore say 4 million Internet users. Probably only about 2–3 per cent of the population would ever want to join a research panel. This equates to about 100,000 potential members, and this assumes that just one company has the ability to reach every single one of them and can motivate them to join, which clearly would never happen. In addition, increasing Internet penetration to say 75 per cent would not solve this problem. This mathematical issue gets repeated in many other European countries, from Greece to Portugal to Finland.

Panel costs

Another issue with panels is their cost. Although some in the USA claim to have set up panels very cheaply, this has not been the experience of European counterparts. In a recent article by the panel provider CIAO,⁸ they estimate that it costs nearly £1m in Europe to set up a panel of just 20,000 people and £500,000 to maintain it annually thereafter. Moreover, they estimate acquisition costs per member of about £20 and a realistic cost per interview of about £12. Interestingly, most panels currently sell interviews at less than this rate (most in Europe charge about £5–£10 per completed interview). This might partly be a reflection of their actual costs being less than CIAO estimates, but more likely that the market will just not pay the CIAO levels, as they are very close to conventional research prices.

Add to this the biggest issue with online panels: their ‘professional respondents’. These are people who are members of many online panels

Validation of online research

(and usually members of individual panels many times). It is very easy for people to become professionals. Many sites (eg www.dougstreet.com) provide listings of the online panels offering the best prizes and reward schemes and show users how they can 'earn \$1 per minute' for filling out surveys. Some even offer forms allowing users to sign up automatically on all the panels in one go. An Australian student who recently contacted the author said she was on around 100 panels which she had managed to join in a few days. CIAO⁹ freely admit that 'There is a hard core of at least 5,000 panellists in each major country (UK, Italy, France, Spain etc.) which forms part of nearly all the self-recruited panels.'

With all these issues, you may be tempted to feel that all attempts to use online panels for research would be worthless. The truth is that despite all these problems, they invariably result in similar findings. Many validations have shown similar patterns of results online. The author's company has conducted a number of surveys covering concept tests and general U&A studies, and has found the following facts.

- Online surveys usually result in lower scores on evaluative scales (eg buy scales, satisfaction ratings). This is generally accepted to be the result of the anonymity/self-completion nature of online surveys. However, the size of the effect does seem to be specific to product fields, and is also affected by the panel company! Indeed, the company recently used a panel made up of participants recruited originally from website competitions. These people actually scored the new concept being tested higher than the conventional test — it is assumed because they thought they had to be nice about the product in order to win the prize draw with the survey.
- Online surveys probably generate more honest answers. The anonymity of the situation also results in greater honesty. Validations have reported people being more willing to admit they did not remember the brand names in adverts they were shown and lower levels of misattribution for example. In the example shown in Figure 3 people in the UK were much more willing to admit they drove (illegally) and used a mobile/cellular phone.
- Across many more factual questions almost identical findings can often be found online.

Figure 2: Example of the lower scores obtained online (buy scale for two cooking idea concepts)

Figure 3: Example of more honest answers online (levels of claimed usage of mobiles while driving in the UK)

In conducting online surveys, the author's company has also learnt a number of practical aspects with which care must be taken with online.

Practical issues with online surveys

- Interview lengths. Ideally these should be kept short — in the author's view less than ten minutes. Most panel companies feel that ten to 15 minutes is acceptable and others regularly run longer surveys. However, InsightExpress¹⁰ has shown that longer surveys result in higher abandonment from those less interested in concept ideas, and this can result in distortions of key scales when long surveys are used. Moreover, these issues are arguably greater in Europe where the prevalence of broadband is less.
- Interview style. This needs to be pedantically clear, as there is no one there to help answer queries. Avoid colloquialisms (especially in international projects) and consider offering the survey in multiple languages. This includes even producing different English versions for each English-speaking country — particularly, for example, for financial products. In addition, the survey must be polite and friendly. Particular care needs to be taken with introductions, which should 'ask them nicely, tell them what you want, tell them how to complete the survey, tell them who the research is for and tell them how long it will take'.
- Questions. There is a body of evidence¹¹ growing that abandonment is highest on surveys that include complicated (and large) grids and opens. Other problem questions are those which involve counting (to ten or 100, say) or ranking. Problems with these questions are often compounded by researchers insisting that respondents complete every question. This forced entry is often accompanied by curt error messages when questions are left blank, all of which compound the drop-out rates.
- Protecting confidential ideas. It is impossible online to protect concept materials. Various systems have been adopted, such as legal agreements and software that stops the saving of images, but they do not stop any user simply taking a digital picture of their screen and mailing it to your competitor in seconds. Buyers of online research

need to be fully aware of this issue and the potential risks they take with online research.

Website surveying

Surveys hosted on clients' websites get around the main problem that has plagued general research online, that of sample. The target audience of website visitors is definable and easy to sample for research. Initial website surveys either involved including surveys in the 'feedback' section of sites or putting up banner adverts to take part in surveys. Both these methods failed because of poor response rates. Most surveys were filled out by only 1–2 per cent of visitors at best, and these usually had marked biases towards either the 'angry' or competition lovers.

Some researchers¹² thought that the solution was to send Internet panels to review sites and then get them to rate them. They set up hall tests to review the website, very much like any other advertising stimulus material. However, there was always the concern that these ratings were very artificial and not from real visitors; many of the respondents might only have spent a short time on the site.

Pop-up survey response rates

This method was quickly superseded by pop-up surveys.^{13,14} This method involves bringing up a survey in a new window as the person surfs a website. It is a relatively intrusive method that forces the user either to fill out the survey or to close the window. However, because it is so intrusive, it can get very good response rates. Virtual Survey's average response rate in the UK and Europe is 25 per cent, with a range of 10–60 per cent. Others in Europe have reported levels down to 2 per cent, and in the USA, where pop-up adverts are more prevalent, response is also much lower. With this wide variation in response rate, the author's company has examined closely the factors that affected it most.¹⁵

The most important was the format of the invite. Those with very low levels of response rates were using invites which gave people the option to close the window or click to carry on to the questions. Instead, it was discovered that it was best to get in straight with two or three questions on the invite and engage the user (ie the exact equivalent of what interviewers do on the street).

It was also found that abort rates on page 2 were high, and on every subsequent page a further proportion were lost. The company therefore tried asking more questions on the first page, but then discovered that if you had a scroll bar in a pop-up window even larger numbers did not complete the survey. The solution therefore adopted was to make questions appear as short as possible using drop-down boxes, and to put as many questions per page which did not require the user to scroll, so keeping total page length down.

However, the overall response rate was also strongly affected by the relationship with the brand. Sites with high proportions of loyal customers had higher response rates, while those targeting potential customers had low ones.

The company also found a marked correlation with overall opinion of website.¹⁶ Possibly somewhat surprisingly, good websites have much better response rates than poor ones. It would appear that if someone has

been very annoyed and frustrated by a website, they were less likely to take the time to help that site in its survey. Clearly this differential response has effects on the data collected, and having norms for such tests is essential in their interpretation. For example, in the UK, on average 87 per cent of visitors say they will come back to the site again. Even the poorest sites researched have scored above 50 per cent on this measure. Without such norms, interpretation of website surveys can be seriously flawed.

The company has not found any consistent demographic biases in response rate. All ages appear to fill them out, although there is certain evidence that women may be slightly more likely to respond than men. It is also thought likely that such surveys lose the tails of the Internet usage distribution, ie the very Net savvy may close pop-ups before they open, and the 'newbies' probably cannot work out what has 'gone wrong' with their browser or how to fill the form out. However, these biases should not be taken out of proportion. Website pop-ups generally get better response rates than conventional street or telephone interviewing, which typically reaches just 10–20 per cent of the population.

Another common error with pop-up surveys is to incentivise them. The author's company has run experiments to determine the effect of incentives and has generally found their effect is to increase response rate by about 10 per cent.

However, incentives come with a series of potential dangers to survey validity. Firstly individuals may fill out surveys many times to try and win the competition; some are very skilled at avoiding controls to stop them. Indeed, someone once filled out a form nearly 1,000 times before the company spotted him and removed his data. There is also the risk that your survey will get picked up by one of the many online competition sites. For example, the Kodak website visitor survey a few years ago got filled in by thousands of 'compers' following such a link, completely invalidating the results.

Use of incentives in open surveys

Figure 4: Virtual Survey's incentive experiment

There is probably an even greater risk that people will fill in nonsense data to get to the end of the survey quickly in order just to enter their name in the draw. Without an incentive, they tend to give up when bored, but at least their data are more usable up to this point. There are also legal problems with 'lotteries' in certain US states and countries around the world, so all in all the small extra gain in response rate by including an incentive on a pop-up survey is never worth it. (Note that incentives are regularly used with panels, and here their usage is probably essential. However, in this situation the potential for the above abuses is markedly reduced as all respondents are identifiable and by definition can only complete the survey by invitation and just once.)

Qualitative online research

Adoption of online qualitative research has been much slower than online quantitative research. This is mainly due to the fact that none of the techniques being used has proved to be an acceptable replacement for conventional methods. This is because good qualitative research is essentially a 'touchy-feely' process, which the very text-based Internet qualitative methods are not. However, there are instances where online qualitative research is appropriate, and indeed is being used, and these will be discussed in more detail. But first it is important to understand the options available to online qualitative researchers.

In Europe, the first online qualitative was probably conducted by Michael Herbert Associates in 1994 and involved inviting people to IRC chat-rooms. Similar methods were used in the USA, and practitioners soon evolved more sophisticated user interfaces. Indeed, the standard research software now includes a number of useful features, such as:

- waiting rooms and client/moderator chat areas
- ability to preload discussion guides/probes etc
- separate windows to display materials and Web pages
- sophisticated management tools, eg access to transcripts, invite systems, etc.

Online groups issues

Many thousands of such groups have been conducted around the world and many have published papers¹⁷⁻¹⁹ and validations about them. The overall feeling from practitioners around the world is that there is something inherently different about them to conventional groups, but there can be circumstances where they are useful. Possibly one of the biggest problems with them is that they have been and still are referred to as 'online focus groups'. This nomenclature implies they are the same as an ordinary focus group but just online. However, there are some key fundamental differences that should be understood.

Online focus groups are purely text-based interactions. They therefore lack the non-verbal communication elements that form a key part of many moderators' analysis and understanding from conventional groups. Online groups have been argued²⁰ to tap the semantic processing of individuals and so are more appropriate for describing factual and reasoned thoughts. In contrast, conventional groups can tap episodic

processing and can more clearly allow you to understand a person's feelings and how they react to stimuli in their own context.

Another issue is the brevity of response. Most typically people answer questions with just a few words or short sentences. It is also very easy for participants to lurk and not actively participate, unless moderators are particularly alert to watch for this. Indeed, as a moderator you do not know what people are doing during your group nor the attention they giving it (if any at all!). Add to this the fact that online the fluidity of discussion is disrupted, and this can interfere with creativity and the flow of new ideas and comments.

Online groups still suffer from technical issues sometimes. All modern software requires some program to run within the browser. These can create conflicts with firewalls (particularly an issue when interviewing people at work), and there are also just general Internet connectivity issues which can mean that respondents may be unable to connect to the group or get disconnected from it.

Having said this, proponents have often argued a number of benefits of online groups. Some, such as immediate access to full transcripts or the ability of clients to watch from their desks, were probably of limited benefit.

However, it has been argued that the lack of pre-group social contact between moderator and client has been a major loss to online groups. Not only does this contact help form relationships between suppliers and clients, but this interaction invariably highlights key aspects of the project/company politics which help the researcher significantly. All of these are lost in the equivalent online environment.

Benefits of online groups

The two main benefits of online groups are probably their ability to reach widely dispersed people and their anonymity. Certainly online groups have made feasible group discussions in parts of the world where they would not have been feasible or cost effective before. They have also made it possible to get together minority groups or those where people are widely dispersed, eg Mid-West farmers in the USA. It is also useful for certain Internet groups, such as 'gamers' or 'netheads', who might be difficult to interview conventionally. There is also a market for groups among those with disabilities or those with rare medical conditions (not only are there too few of these people to get together to make a group but they might not be able to leave their homes).

The anonymous environment has also been shown²¹ to result in more honest answers, particularly in the case of younger people and when researching sensitive subjects. However, others²² have argued that responses are 'differently honest' because of role playing and deliberate delusions by people in the online chat-room environment.

The final issue that is markedly different from online quantitative research is that of costs. Online groups are often no cheaper than conventional ones in most countries. The reason for this is that reduced location fees are balanced by the higher costs of dual moderators (usual) and the need to pay for technical support people. (The project set-up and analysis time costs are the same as conventional groups generally.) The exception here is the USA, where the high costs of moderators (and

Table 2: Summary of key pros and cons of online focus groups

Pros	<ul style="list-style-type: none">— Easier to conduct with certain groups, eg samples spread geographically, disabled, Internet 'netheads'— Sometimes more honest, eg researching sensitive subjects or with young people— Sometimes cheaper to conduct (mainly USA)
Cons	<ul style="list-style-type: none">— Lack non-verbal behaviour and conventional group dynamics— Brevity of response and worse at understanding feelings/detailed thought processes— Technical issues (from the anarchic, unstable environments to lack of researcher skill)— Concerns about true identity of respondents— Lack of client/researcher interaction pre/post-groups

clients) travelling to locations can often mean that online groups can be cheaper.

The USA also differs somewhat from another perspective, with more people being active users of instant messaging, chat-room and community interfaces than elsewhere in the world. This means that both clients and respondents tend to find the whole concept more 'normal' than elsewhere in the world.

A summary of the key pros and cons of online focus groups can be found in Table 2 (for a fuller critique see one of the many articles by Greenbaum²³).

There are also other online qualitative techniques that are being used. These are asynchronous groups that take place over a period of time. The two main sorts are bulletin board focus groups (BBFGs) and moderated e-mail groups (MEGs).

Moderated e-mail groups

MEGs originated out of work by Comley and Eke,²⁴ who were dissatisfied with online groups, and some initial work that had been done with e-mail lists. MEGs are technically very simple. They involve a moderator conversing directly with a group of around a dozen people by e-mail. Questions are mailed directly to individuals (not broadcast to the group), who then respond direct to the moderator who summarises responses and feeds them back to the group for comments. The process then iterates through various topics, typically over a period of one to two weeks (although they have been run over longer periods).

The approach is not too dissimilar to the Delphi technique. Indeed, the technique was initially invented as a business-to-business solution, although in practice it has worked equally well (possibly better) in the consumer environment.

The main benefits over online groups are the depth of response. Not only do many participants write very detailed answers to questions but response is obtained from the whole group and not just the active few. This therefore means that fewer groups need to be run. However, the technique has not been that widely adopted mainly because of the high executive input required to run projects.

Bulletin boards

Bulletin boards were used by a few for qualitative research in the mid-1990s. However, there were issues over the environments being used at that time and the difficulty of getting people to participate and control

Table 3: Potential uses of online qualitative research

— Where respondents and moderators are widely geographically spread— For researching people with accessibility issues— For researching specific minority Internet users— For very fast turnaround projects with simple objectives

their interaction. In the last few years, much better research-specific environments have been created. These allow, for example, the moderator to pre-load discussion guides and the moderating process to be largely automated. There is control over what individual participants do, eg insistence that they review material in a certain order before they can comment themselves. Reminders to non-responders to participate are also automated. There are also facilities to hold instant straw polls — particularly liked in the US qualitative environment.

Of all the online qualitative techniques, BBFGs probably have the most ongoing potential, especially in the USA because of both client demand for mixed qualitative/quantitative research and the fact that participants are more familiar with the environment (see above). However, elsewhere in the world usage of online groups of any format will probably remain much more restricted. Moreover, most practitioners strongly advise using them as additional techniques and not as full substitutes for conventional research.

The future of online research

According to Inside Research's survey²⁵ of website practitioners, the online research market in Europe will hardly grow in 2002. In the author's view this will turn out to be too pessimistic, and Europe is about to start embracing online research the way the USA did a few years ago. This is because Europe typically follows US trends, albeit lagged by a few years. In addition, acceptance of online surveys in the media generally is increasing, and this will impact upon research buyers' willingness to adopt them.

Clearly the differences outlined in availability of panels will mean that it may be slower, but the inclusion of it among the armoury of the European researcher is inevitable, although its usage will remain for a while more limited. However, in certain areas it will soon begin to have a significant impact.

Where online research will have an impact

- Projects where speed is of overriding importance. Indeed, it will enable many surveys to be conducted that would just never have taken place before because they would have taken too long.
- For very large-scale surveys where online can offer significant cost savings.
- Concept screening. Again an area where speed is often of paramount importance, although confidentiality will remain an issue online. For this reason its usage is likely to be more for initial screening of ideas than for testing fully developed ideas just before launch, where the risks of the openness of the Internet are higher.

- Advertising/brand tracking. This is already a big area for online research in the USA and offers great savings, mainly because of the large sample sizes often involved.
- Customer satisfaction monitoring. Again, many have already set up automated systems to collect satisfaction data from customers online and this area will proliferate (although often conducted internally with automated systems).

New methods: RAWI

There will also be developments in methods. For example, the author's company has recently developed an alternative to online panels that gets around many of their problems.²⁶ Called random Web interviewing (RAWI), it offers limitless samples of online users recruited randomly when they are required in any country worldwide. This could well replace online panels in many non-US countries as the main method of online research.

Eventually mobile interviewing will also become feasible as devices become more sophisticated and with better bandwidth. Currently mobile surveys (even using I-mode) are only appropriate for very short, simple surveys.

It is likely that online qualitative research will remain a niche activity for the time being, particularly in Europe, mainly because current online methods are the antithesis of good qualitative research which involves depth of understanding. However, widespread usage of broadband and the option of video-streamed online groups might change this situation.

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