

# Surveying users of electronic library services by telephone

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## Abstract

Although electronic media and services have been established in academic libraries' service profiles, they do not seem to be widely accepted by users yet. Field tests during the EU-funded EQUINOX project showed that web log files can provide some useful information but analyses of use are often prevented by technical problems. User surveys can help libraries to analyse user behaviour and attitude towards electronic library services. Telephone interviews with users of the University and Regional Library Münster, one of the EQUINOX partners, have proved that this is a better instrument to gain representative results than other survey methods.

## Background

The starting point of this survey is strongly connected to the European Union funded project Equinox (2001) that produced a set of 14 performance indicators on electronic library services. One immediate finding of Equinox was that web statistics offer a wide range of "technical" data that leave many quality related questions unanswered, and user-based (in contrast to *use-based*) statistics are rarely available. Three indicators regarded as most useful by the 45 Equinox test sites were affected by this, raising the need for other methods of data collection:

- the percentage of the population having used electronic services (*market penetration*);
- the preferred *origination* of use where IP addresses do not provide valid information;
- *user satisfaction* with the library's electronic services.

In past years, staff at Münster University and Regional Library had conducted a comprehensive array of user surveys on different topics, none of which had specifically addressed users' familiarity with and behaviour using electronic library services. In the conceptual phase of this survey it became clear that in addition to validating the Equinox indicators and testing the survey instrument, this survey should:

- give us in-depth information on user behaviour with electronic library services, and
- give us data to help us to improve our website and tailor it to the needs of our customers.

On the strategic level,

- we had the strong will to document our role as primary supplier of electronic library services in a two-tier university library system, and
- we wanted to raise awareness about those of our electronic services which were less heavily used because they were not well-known among our user community, using the participants in the survey as multipliers.

## Selecting the survey method

A number of "generic" survey methods are in more or less common use among libraries. Other methods, e.g. e-mail questionnaires, can be regarded as mixed forms, and their methodological profile may be derived from the methods considered below. A combination of methods was excluded from the start as being too time-consuming. We confined the decision to a choice between the following instruments:

- **Mail questionnaire:** a print questionnaire mailed to a sample of the population;
- **Visitor survey:** a self-administered questionnaire handed out to visitors of the library premises;
- **Online questionnaire:** a questionnaire in pop-up form or on a static web page;
- **Telephone survey:** a standardised computer aided telephone interview (CATI).

These methods differ significantly in their approach to deliver questions to participants, and this affects their practicality and appropriateness for the given situation. A list of nine decision criteria reflecting our requirements was set up to determine the most appropriate method.

- **Representativeness:** Is the method suitable to produce a "representative" sample? All members of the population should have an equal probability to be part of the sample, and the sampling method should not cause self-selection among certain subgroups of the population.
- **Completeness:** Can missing values be avoided?
- **(Interpersonal) reliability:** Is the survey contact likely to be biased by the interviewer?

- **Return rate:** Will many contacts be likely to respond?
- **Call-back:** Can non-respondents be contacted again?
- **Return time:** Will responses be quickly available for analysis?
- **Preparation:** Has the survey method been conducted in a similar setting before? Is any experience available on the local level?
- **Data format:** Will the survey generate data in the format needed for analysis, or will print results have to be transformed into electronic data?
- **Materials cost:** Can the method be executed at low cost of materials, i.e. postage and communication costs? Staff costs are excluded here because they are inherent in some of the factors listed above. Costs for software tools did not arise.

For each method, the nine criteria were rated (+) for “advantage” or (-) for “disadvantage” in the decision table shown in Figure 1:

Figure 1: Selection of the survey method

	Mail questionnaire	Visitor survey	Online questionnaire	Telephone survey
Representativeness	+	-	-	+
Completeness	-	+	+	+
Reliability	+	+	+	-
Return rate	-	+	-	-
Call-back	+	-	-	+
Return time	-	+	+	+
Preparation	+	+	-	-
Data format	-	-	+	+
Materials cost	-	+	+	+

Although the criteria were not weighted and no formal calculation was applied, it was evident that the method had to support the generation of a representative sample that enabled us to calculate market penetration and other items of user behaviour from the survey results. This ruled out two methods, including the online survey. This method, in spite of its growing popularity and excellent design options (“split” and “jump” procedures, rotation of questions and answers, implementation of multimedia elements etc.), is likely to produce a self-selective sample for the following reasons:

- Frequent and experienced users of the Internet are more willing to respond to an online survey than others (Hauptmann/Landers, p.37);
- Although the rapidly spreading use of the Internet certainly supports the acceptance of electronic library services, some members of the population might still use the Internet less frequently than others, thus not taking notice of the survey;
- In principal, taking part in a survey should not impose any costs to participants. Accessing a survey from a home PC, however, will in many cases involve communication costs.

### Important issues

#### SAMPLING

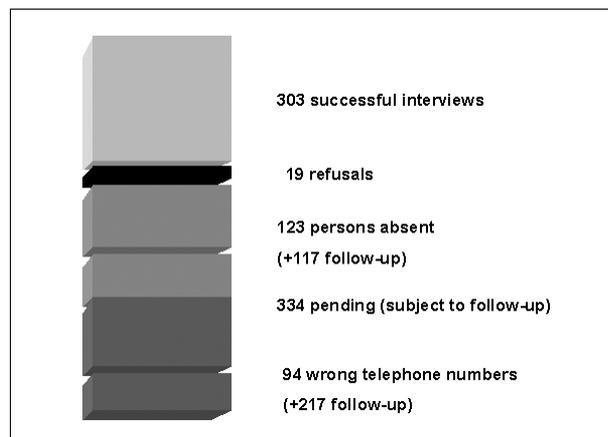
It is important to know how many persons have, in fact, not been included in the sample although they were contacted, including persons that could not be contacted although telephone numbers were verified.

By generating the sample from our customer database and the university phone book, we achieved an acceptable inclusion rate of 88 per cent. A sample size of n=873 was then calculated, giving consideration to availability of survey staff during the field phase. This had been set up as four weeks in June and July 2000 (50 per cent during the semester). The length of the field phase was based on an estimate of 5 successful interviews per working hour.

A total of 303 interview contacts were positively established and conducted. Only 19 people refused to take part in the survey.

Although a minimum of four contact attempts per interviewee at different times and on different days was agreed upon until a contact was regarded as “unsuccessful”, 334 telephone numbers could not be verified during the field phase. To classify these “pending” contacts, all telephone numbers that had not been verified or shown to be incorrect in the field phase were approached again in a follow-up phase in autumn. During this follow-up, no more interviews were conducted. About two-thirds of these numbers turned out to be invalid or wrong, and 117 persons had been absent during the field phase.

Figure 2: Sample generation



Invalid telephone numbers do not systematically affect the quality of the survey results (Költringer, p.110) and can therefore be excluded from the calculation of a net exhaustion rate. The result of a 54% return rate is calculated from the 303 successful contacts and those that were regarded as quality relevant (refusals and cases of absence).

INTERVIEW SITUATION

A telephone interview is a complex social situation to manage. The following aspects require careful preparation:

- **Anonymity:** Lack of legitimisation requires careful build-up of the interview;
- **Initiative:** Flexibility that allows preparation of the opening section of the interview, and to generate answers on difficult questions, like those regarding anonymity and possible consequences of the survey. Flexibility also allows for call-back routines. Many call-back appointments that were scheduled, however, were refused when contact was reinitiated at the appointed time.
- **Mono-sensory contact:** Telephone communication lacks visual and other perceptual feedback, which may affect comprehension of the questionnaire. Short sentences and simple terminology are therefore required, especially if language problems exist;
- **Spoken word communication** is ambivalent. It can clarify, but also raise misunderstandings. Response errors and misunderstandings can be corrected immediately, but interviewer bias is likely to appear and thus requires a standardised questionnaire and procedures;
- **Closed circuit:** Confidence and intimacy of a telephone interview encourages open answers;
- **Remote situation:** Persons interviewed may be distracted by third parties at home or in the office, at worst resulting in a break-up of the interview.

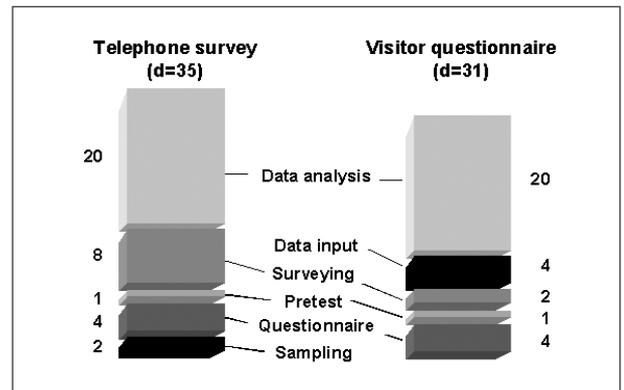
The interviews were conducted by two people who had gained experience in telephone marketing research, although neither of them had conducted a telephone survey before. Thus, mutual supervision between interviewers was essential for standardising interview procedures and increasing their experience with the method.

STAFF TIME SPENT

It may be argued that the time consumed by this survey method is significantly higher than for other methods. Figure 3 compares staff days spent on the telephone survey to the most “simple” alternative, a survey questionnaire handed out to library visitors. Comparative data are taken from our last general user satisfaction survey in May 2000 and, where relevant, have been modified to meet n=303.

The results show that it took four days longer to survey the same number of persons by telephone than using self-administered questionnaires. This difference mainly resulted from the time spent on unsuccessful telephone contacts, which took longer than data input on written questionnaires.

Figure 3: Comparing staff days spent



Questionnaire

The survey items chosen strictly followed the aims mentioned above, and item selection was based on an average interview duration of five to eight minutes. No attempt was made to assess all relevant facets of user behaviour or satisfaction. 17 questions were divided into the following sections:

- Frequency of library visits
- Internet use
- Use of electronic library services
- Origination of use
- User-friendliness of electronic library services
- Learning behaviour with electronic library services
- Demographic criteria

The survey questionnaire was transformed into an electronic form, allowing the interviewer to input answers immediately into an MS Access database. While the order of questions remained unchanged throughout all interviews, all single or multiple choice answers featuring ordinal scales (quantity of use, etc.) were rotated.

Experiences and consequences

- The EQUINOX performance indicators “market penetration” and “remote use” were positively tested, provided that the sample can represent the population to be served. Both indicators have been included in a technical report, which will extend ISO 11620 later in 2001.
- Due to a short sample period, too many contacts remained pending.
- Care must be taken to minimize interviewer’s influence on the survey results.
- Subject and credibility of the institution led to a high response rate (one rejection in 16 interviews).

- Nearly 30% of sampled telephone entries in the customer database were outdated. The customer database will therefore undergo a major relaunch when a student smart card is introduced in 2003-4.

An in-depth analysis of the results will be published separately in the near future.

## References

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