


The survey in social sciences: main aspects

Manuela Bussola, Francesca Cini, Federica Pellizzaro

	<h2>Narrare i gruppi</h2> <p><i>Etnografia dell'interazione quotidiana</i> <i>Prospettive cliniche e sociali</i>, vol. 5, n° 1, Marzo 2010</p>	ISSN: 2281-8960
---	--	------------------------

Rivista semestrale pubblicata on-line dal 2006 - website: www.narrareigruppi.it

Titolo completo dell'articolo
The survey in social sciences: main aspects

Autore	Ente di appartenenza
Manuela Bussola	<i>Manuela Bussola is a PhD student in "Applied Research in Social Sciences" at the Sapienza, University of Rome. She collaborates with IRPPS-CNR.</i>
Francesca Cini	<i>Francesca Cini is doctor (PhD) in "Applied Research in Social Sciences". Currently, she is research fellow in Sociology at the faculty of Psychology 2, "Sapienza", University of Rome.</i>
Federica Pellizzaro	<i>Federica Pellizzaro is a PhD student in "Applied Research in Social Sciences" at the Sapienza, University of Rome. Her main reserach interests are on Higher Education for Research</i>

To cite this article:
Bussola m., Cini F., Pellizzaro F. , (2010), The survey in social sciences: main aspects, in <i>Narrare i Gruppi</i> , vol. 5, n° 1, Marzo 2010, pp. 81-94 - website: www.narrareigruppi.it

<p>Questo articolo può essere utilizzato per la ricerca, l'insegnamento e lo studio privato. Qualsiasi riproduzione sostanziale o sistematica, o la distribuzione a pagamento, in qualsiasi forma, è espressamente vietata.</p> <p>L'editore non è responsabile per qualsiasi perdita, pretese, procedure, richiesta di costi o danni derivante da qualsiasi causa, direttamente o indirettamente in relazione all'uso di questo materiale.</p>

Ricerche/interventi

The survey in social sciences: *main aspects*¹

Manuela Bussola, Francesca Cini, Federica Pellizzaro

Riassunto

Il lavoro mostra in maniera sintetica le principali fasi che compongono il ciclo della ricerca sociale. L'attenzione è rivolta in particolare all'utilizzo dell'indagine come metodo di ricerca e del questionario strutturato come uno dei maggiori strumenti della survey.

Il lavoro presenta una duplice finalità: una di tipo teorico e l'altra di tipo metodologico.

Inizialmente, verranno presentate le fasi fondamentali del ciclo della ricerca sociale che - in accordo con la letteratura di riferimento - viene definito come un percorso "elicoidale", che rimanda costantemente ai vincoli che regolano e guidano gli obiettivi e i risultati della ricerca.

La seconda parte del lavoro è costituita dalla descrizione di una delle procedure più utilizzate per analizzare fenomeni sociali: l'indagine con questionario strutturato.

Le varie fasi di costruzione di questo strumento sono mostrate attraverso la descrizione di un lavoro empirico svolto nel 2009 all'interno di un ciclo di lezioni frontali realizzate per l'*International Course on Applied Anthropology to Development Process*. Il concetto di soddisfazione turistica - scelto perché ritenuto una tema molto vicino alle esperienze personali dei partecipanti - è stato definito nelle sue dimensioni concettuali ed empiriche fino a giungere alla creazione di un questionario strutturato creato *ad hoc*. Nella descrizione di questa esperienza, viene posto un particolare accento su come evitare i più comuni errori che possono insorgere nella creazione degli *items* di un questionario strutturato e sull'importanza della fase del pre-test.

Abstract

This paper is aimed at presenting the social research process with reference to: 1) the whole vision and 2) the use of the survey as social research method and the structured questionnaire as a main tool of social survey.

The paper is composed by two main parts: theoretical and methodological.

In the first part, authors try to briefly clarify the main aspects of a research process.

According to the literature, the research process is designed as an "*helical model of social research*" in which each stage affects three main constraints that represent a process core.

Second part is composed by description of survey in social research and construction of a structured questionnaire.

The questionnaire shown in this paper is the result of some classes on applied methodology within the *International Course on Applied Anthropology to Development Process*.

¹ Authors' contribution: Manuela Bussola: 1; 2.3; 3; Francesca Cini: 2.2; 3; Federica Pellizzaro: 2; 2.1; 2.3; 3.

The empirical experience concerned the tourist satisfaction that was chosen as topic to analyzed because it represents an experience close to their tourist stay in Rome. Theoretical and empirical dimensions are defined and how can design a structured questionnaire. In this part, authors try to clarify the way to avoid common biases connected to the questions construction and the use of pre-test.

1. Helicoidal model of social research

The aim of this paper is to present the social research process, according to the whole vision and to broad the use of the survey as social research method and the structured questionnaire as a main tool of social survey.

The paper is the result of some classes on applied methodology within the *International Course on Applied Anthropology to Development Process*.

Firstly, it is important to explain what is a social research and the meaning of it.

Social research is a scientific investigation aimed to produce a theoretical justification from empirical evidences.

Therefore, it is a scientific investigation concerning social phenomena, to answer question about social problems.

In order to produce knowledge, social research apply a scientific method that consists of the collection of data through observation and experimentation, and the formulation and testing of hypotheses.

As scientific process, the social research is driven by a set of rules that have to be accepted by scientific community.

The scientific methodology is a set of specific rules and procedures upon which the research and with which the applications of knowledge are valued.

So the whole research process is governed by its own method. According to Nachmias& Nachmias (1982) the different sciences are not linked by their subject of study, but rather then their methodology.

Without going into the details of the debate about the use of the methodology in the social sciences, in general methodology is a theory of procedures and it is a link between theory and empirical facts.

In order to clarify the main aspect of a research process, it must describe, step by step, the different elements of the process.

According to L. Cannavò (Cannavò, 2007) the research process is designed as an "*helicoidal model of social research*"; it is not a easy sequence of linear steps, rather the most characteristic feature of the research process is its cyclic nature. It consists in a process starts with a problem and ends with a tentative empirical generalization.

The reason the process is defined as *helicoidal*, resides in the fact that the last step - defined as "generalization" - goes in the direction of the fulcrum of the process it is spinning around. This fulcrum is built on a constraints system.

The generalization ending one cycle is beginning of the next cycle. This cycle process continues indefinitely.

It is important to emphasize that each stage affects a three main constraints that represent a process core.

They can be classified in "theoretical", "conceptual" and "telic" constraints.

The first one is shaped by the theories, whereas the second one belongs to empirical level. In literature, the third one sometimes is neglected.

In general, the first step in social research is a definition of a "problem".

A problem is a fence, recognized by a scientist, although besides a specific definition of it, it is more important underlined what allows us to understand a problem, this is hypothesis.

In the social science, a *hypothesis*

“[...]is a reasoned but provisional supposition about the relationship between two or more social phenomena, stated in terms that can be empirically tested and which forms the focus for research.”(Payne, Payne 2004, p.112).

So, hypothesis is an explanation of a phenomenon that suggests a possible correlation among a set of phenomena. This correlation is build up by the *Research design*.

A research design provides the links that allow the operation of the process.

A research design is used to design the research, to show how all of the major parts of the research project - measures, sample, constraints, theory and concepts - work together to try to reach the goal of the process. It is the *explicit step*

In general, it must recognize three different types of research design: Descriptive, Explorative and Explanative.

Scientists use these different methods in order to understand, describe or explore social phenomena and they depends on a type of hypothesis.

However, when social phenomena is explained and predicted, we must understand the conceptual ground of the research: the concepts and the theory.

It is defined as Conceptual level, different from the empirical level.

A concept is an abstraction, a symbol or a presentation of one object or one of its properties, and it serves to

create the foundation for communication among researchers.

Also it allows scientists to classify their experience and to make generalizations from them and introduce a prospective for looking at empirical phenomena. Briefly, the concept defines a theory's content and its attributes.

Without a clear agreement on the real meaning of a concept, scientists cannot communicate and reproduce the same results.

Marradi suggested that the concept allows researchers to classify their experience and make generalization based on them.

Further, Nachmias observes the following:

“[...] apple, palm, pine, fir came within the general concept of “tree”; Tree is an abstract concept and it incorporates unique attributes of all these things. This type of abstraction allows researchers to delineate the essential attributes of different types of empirical phenomena” (Nachmias, Nachmias, 1982)

Besides the conceptual level there is the empirical level, in which researchers create a data-set and, after, carry out the data analysis. In order to conduct the good data set it is important to clearly define the units of analysis, congruent with the rational of research, and to conduct an accurate sampling.

There are different levels of data analysis and different modes of data collection: face to face, by telephone or by using a self-administrated questionnaire. Scientists must decide on the specific mode from previous steps of the research process. In general, we can consider a scientific result as evidence that it is not only possible to report, but also to generalize.

As a whole, it must distinguish between:

- Induction
- Abduction

The first consists of a process that ascribes properties or relations to types based on an observation instance. The validity of the rule of induction is deducible from the principle that the reality is only the object of the final opinion to which adequate investigation would lead.

The second is based on the analogy process. It performs a probabilistic abstraction on similar cases but not identical.

It is a method in which scientists choose the hypothesis that would, if true, best explain the relevant evidence.

At the end of the process, there is not a just report of results. After generalization, researchers generate a new concept. Furthermore, the process is defined as helicoidal because there is a third way: results modify the original constraints structure and begins a new process that will start with a new point of view.

2. The survey in social research

After the presentation of the helicoidal (or helix) model of social research, we will present one of the most widely tool used by social scientists to study social phenomena: the survey.

People are used to seeing the results of surveys reported in newspapers, mentioned on numerous occasions by political analysts, social scientists, and economic forecasters. But less frequent, however, there is any discussion of the reliability of these surveys or what is involved in carrying them out (Biemer P., Lyberg L., 2003).

The consequences of the availability of large amount of data are that people could be easily deceives into assuming that surveys are easy to manage. Often, the surveys reported in daily press are displayed without sufficient awareness of the many different aspects of the process that need to be controlled.

Nonetheless, until the reader of these survey results isn't aware of what is involved in a survey, and what quality controls are needed, he or she is unable to form any opinion of the confidence to be placed in the results (Scheuren, 2004).

The aim of this presentation will be a better understanding of what is involved in carrying a survey out: not only technical issues, but, most importantly, the many steps involved in a properly-conducted survey.

We will also try to present briefly an insight into the various types and methods of survey research.

First of all, there are three general types of survey: cross-sectional survey, longitudinal study, panel study.

Cross-sectional studies can be thought as a representation of the frequency and characteristics of a population at a particular point in time. The crucial difference between cross-sectional and longitudinal studies is that the longitudinal one involves repeated observations of the same items over long periods of time. Panel studies measure the same sample of respondents at different points in time. In this type of survey, a sample is selected and interviewed; sample members are then re-interviewed to monitor the effects of some important social event.

Surveys could have different forms and a large variety of purposes, but they do have certain characteristics in common.

For example, unlike a census, they gather information from a small or large sample of people. The sample is selected neither randomly nor from persons who volunteer decide to participate. It is scientifically chosen so that each individual in the population has a known chance to be picked out. In this way, the results can be reliably projected to the larger public.

Surveys can also be classified by their method of data collection: thus, by telephone interview, by face-to-face interview and by electronic mail.

In the recent years, the surveys in which the data are administered through the internet are very widespread.

2.1 Sampling procedures

The term survey is often used to describe observations or investigations of the facts about a situation. But in our case the word is used to identify a method of gathering information from a number of individuals, a "sample," done in order to learn something about the larger population from which the sample was drawn. Social survey is a systematic and standardized examination for obtaining information about a population by means of a series of specific, targeted questions.

“[...]The survey's intent is not to describe a specific person who by chance is part of the sample, but to obtain a statistical profile of the population” (Scheuren, 2004)

The particular type of sample used depends on the objectives and scope of the survey, including the availability of budget, the method of data collection, the subject matter and the kind of respondent needed.

“[...]The types of samples range from simple random selection of the population units to highly complex samples involving multiple stages or levels of selection with stratification and or clustering of the units into various groupings” (Scheuren, 2004).

In the modern sample theory, a basic distinction is made between probability and non probability sampling.

The eminent characteristic of probability sampling is that it is possible to assign the probability that the unit will be included in the sample for each sampling unit of the population. In the simplest case, all the units have the same probability of being included in the sample. In non probability sampling, there is no way of specifying the probability of each unit's inclusion in the sample, and there is no assurance that every unit has some chance of being included.

There are four probability sampling techniques utilized by researchers: simple random sample, systematic sampling, stratified sampling, cluster sampling.

In statistics, a simple random sample gives each member of the population an equal chance of being chosen. Each member is chosen randomly and entirely by chance, such that each individual has the same probability of being chosen at any stage during the sampling process. Simple random sample is not a haphazard sample as some peo-

ple think. One way of achieving a simple random sample is to number each element in the sampling frame and then use random numbers to select the required sample.

Systematic random sampling uses the same statistical principles as simple random sampling but this method involve the selection of every k^{th} element from a sampling frame, where k , the sampling interval, is calculated as:

$k = \text{population size (N)} / \text{sample size (n)}$

Using this procedure each element in the population has a known and equal probability of selection.

Stratified sampling is a method of sampling used when, within a population, the subpopulations vary considerably. In these cases, could be advantageous to sample each subpopulation, called *stratum*, independently. Stratification is the process of grouping members of the population into subgroups with the same characteristics before sampling. The strata should be mutually exclusive: every element in the population must be assigned to only one stratum. The strata should also be collectively exhaustive: no population element can be excluded. Then random or systematic sampling is applied within each stratum.

At the end, cluster sampling is a sampling technique used when natural groups are easily recognizable in a statistical population. In this technique, the total population is divided into groups or clusters and a sample of each group is selected.

The three major non -probability sample designs utilized by social scientists are: convenience samples, purposive samples, and quota samples

Convenience samples research obtain a convenience sample by selecting whatever sampling units are conveniently available.

With purposive sample the researcher, subjectively, selects sampling units in order to obtain a sample that appears to be representative of the population. In other words, the chance that a particular unit will be selected depends on the subjective judgment of the researcher.

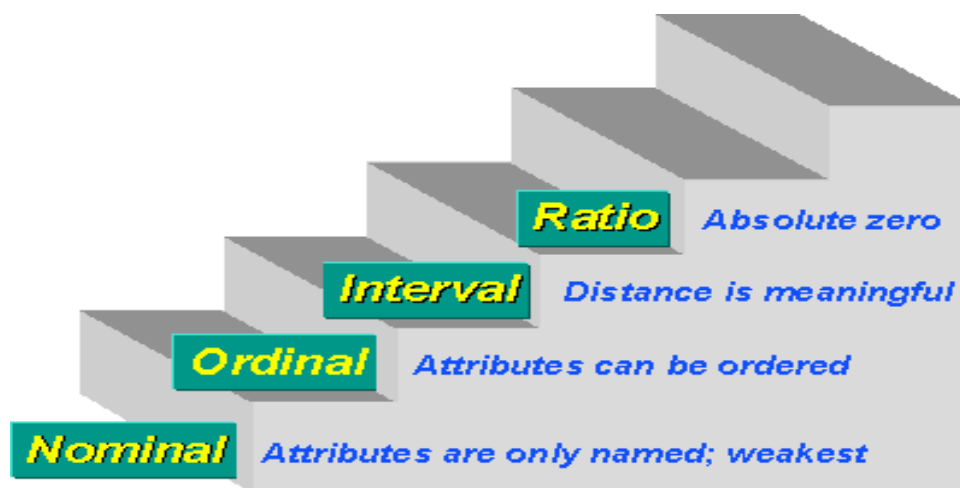
Instead, the chief aim of the quota sample is to select a sample that is as similar as possible to the sampling population. For example if it is known that 20% of the population is student 20% of the total sample will consist of student.

2.2 The questionnaire

One of the most used instrument for collecting data in the survey is a structured and standardized questionnaire. The questionnaire is the main method in the survey for extracting information and careful questionnaire construction is important in order to obtain high quality data.

Considering that it is usually composed by a number of different types of questions able to measure different types of concepts, it is noticeable to firstly highlight how social patterns can be measured. In general, measurement is the assignment of numerals or numbers to objects, events or variable, according to rules which have the function to tie the measurement procedure to the reality. The crucial question is whether the numerical system used to measure concepts is similar in structure to their own structure (isomorphism). In order to measure each event in relation with its nature, it is important to refer to the levels of measurement. In particular, Stevens (1946) distinguished those levels in: nominal, ordinal, interval and ratio (see Fig. 1).

Figure 1 – Levels of measurement



(source: www.socialresearchmethods.net)

Consequently, moving from the theoretical to the operational level implies procedures that take into account the nature of all the properties considered in the research design and then the most adequate measurement system. Different types of properties will generate, through different ways of measuring, different types of variables.

The nominal is lowest level of measurement that generates nominal variables. In this case, numbers or other symbols are used to classify objects or observations into a number of categories. Here numbers have only the labeling function and, of course, they do not have the properties of the cardinal ones. A couple of examples are:

1. Gender: (1) Male (2) Female

2. What is your current marital status?

- | | |
|--------------|---------------|
| (1) Single | (4) Separated |
| (2) Married | (5) Widowed |
| (3) Divorced | |

At nominal level of measurement, a variable included in the questionnaire is a classification system and then it must be aware of the classification rules. First, responses categories must be exhaustive, that is, that each case must be classified. In order to satisfy this rule, a residual category must be included.

For example:

1. Which means of transport did you use most in your last holiday journey?

- | | |
|-------------|--------------------|
| (1)airplane | (3)car |
| (2)train | (4)other (specify) |

Second, responses categories must be mutually exclusive, that is, with no case that be classified as belonging to more than one category. In order to satisfy this rule, it could be asked to respondents to check the most appropriate answer or to check one or more than one answer if he/she needs. A couple of examples:

1. Which of the following aspects best describes your holiday (check the most appropriate answer)?

- | | | |
|--------------------|--|---------------------------|
| (1) | | (4) Friends and relatives |
| (2) Alone | | (5) Organized groups |
| (3) A couple | | |
| (4) Family members | | |

2. In what types of sources did you use to find information of Rome? (check one or more than one if you need)

- | | |
|---------------|----------------------|
| (1) Magazine | (4) Words of Mouth |
| (2) Newspaper | (5) Television |
| (3) Internet | (6) Others (specify) |

At the ordinal level, categories are not only classifiable but also exhibit some kind of relation, such as “higher”, “greater”, “more desired”, and so on. Moreover, such relation is irreflexive, asymmetrical and transitive.

The most familiar kinds of ordinal data come from scales like the following: 1 standing for “agree strongly”, 2 standing for “agree” 3 standing for “neither agree nor disagree”, 4 standing for “disagree”, 5 standing for “disagree strongly”. At this level of measurement, the numbers do not indicate absolute quantities, thus, the interval between the ranks cannot be considered equal. An example:

1. How much was your expectation about the hotel accommodation before checking in:

1. very little
2. little
3. so-so
4. much
5. very much

Ordinal measures are the most common in surveys.

Differently from the above mentioned level of measurement, in the case of the interval level the distance between the attributes does have meaning and it can be considered equal. Regarding the temperature measurement (for example in Fahrenheit), the distance from 30-40 is same as distance from 70-80. Thus, it makes sense to compute the average of an interval variable but not ratios: 60 degrees is not twice as hot as 30 degrees. Another example of interval variables is the Intelligent Quotient.

At the higher level of measurement there is the ratio one. In this case, there is a true zero point that makes sense to construct a meaningful fraction. In applied social research most "count" variables are ratio, for example, the number of clients in past six months. This is because you can have zero clients and because it is meaningful to say that in the past six months one had twice as many clients in the previous six months.

Another example of a ratio scale is the amount of money you have in your pocket right now. Money is measured on a ratio scale because it has a true zero point. If a person has zero money, this implies the absence of money and it makes sense to say that someone with 100 euro has twice as much money as someone with 50 euro. In conclusion, it must be remarked that variables that can be measured at the ratio level can also be measured at the interval, ordinal and nominal level.

Other questions characteristics concern their content, their format and the sequencing (Nachmias & Nachmias, 1982).

Regarding the content, questions can be divided in factual and those about subjective experiences. The first ones concern objective information from the respondents such as their backgrounds (gender, age, marital status, education or income)(see examples above displayed), their social environment (people living in the household), habits (means of transportation used) and so on. Conversely, the second ones regards subjective information that involve respondents' beliefs, attitudes, feelings and opinions. Below an example concerning the respondents' expectation and satisfaction level about a tourist site (see table 1).

Attributes	Expectation					Satisfaction				
	Very low expectation					Very high expectation		Very dissatisfied		
Monument	1	2	3	4	5	1	2	3	4	5
Historical buildings	1	2	3	4	5	1	2	3	4	5
Culture villages	1	2	3	4	5	1	2	3	4	5
Museums	1	2	3	4	5	1	2	3	4	5
Galleries	1	2	3	4	5	1	2	3	4	5
Traditional scenery	1	2	3	4	5	1	2	3	4	5
Arts(music/dance)	1	2	3	4	5	1	2	3	4	5
Architecture	1	2	3	4	5	1	2	3	4	5
Handicrafts	1	2	3	4	5	1	2	3	4	5
Theaters	1	2	3	4	5	1	2	3	4	5
Festivals/Events	1	2	3	4	5	1	2	3	4	5
Historic people	1	2	3	4	5	1	2	3	4	5
Religious places	1	2	3	4	5	1	2	3	4	5
Food	1	2	3	4	5	1	2	3	4	5
Shopping places	1	2	3	4	5	1	2	3	4	5
Information centers	1	2	3	4	5	1	2	3	4	5
Atmosphere/people	1	2	3	4	5	1	2	3	4	5
Indoor facilities	1	2	3	4	5	1	2	3	4	5
Accessibility	1	2	3	4	5	1	2	3	4	5

Table 1 – Tourist expectation/satisfaction
(source: Jin Huh, 2002)

Regarding the format, questions can be of two types: closed-ended questions and open-ended questions. The first ones are composed by a set of coded answers and respondents are asked to choose the one that most closely represents their view. Conversely, the second ones are not followed by any kind of specified choice and the respondents' answers are recorded in full. Closed-ended questions are generally introduced in a questionnaire when the researcher has a broad knowledge of the research topic providing in advance a set of response categories, while open-ended questions are preferred when the researcher has many information about a research topic and consequently are unable to providing a set of coded answers (e.g. Steckler, McLeroy, Goodman, Bird, McCormik, 1992). Closed-ended questions can be: yes/no questions, multiple choice and scaled questions. The latter can be proposed as a matrix question

that is a method of organizing a large set of rating questions that have the same response categories. An example of matrix question is the above one regarding tourist expectations and satisfaction.

Open-ended questions² are instead completely unstructured. For example: What is your opinion about abortion? According to Nachmias & Nachmias (1982), other types of open-ended questions are:

- word association (after the presentation of a set of words the respondents are asked to mention the first word that comes to mind);
- sentence completion (respondents are asked to complete an incomplete sentence);
- story completion (respondents are asked to complete an incomplete story).

Lastly, regarding the sequencing, questions can have a funnel sequence, when each successive question is related to the previous question and has a progressively narrower scope, or an inverted funnel sequence, when narrower questions are followed by broader ones.

Paying attention to each step of the questionnaire construction is important in order to obtain high quality data. More specifically, in this sense, it is relevant also to know and, then, to avoid, as much as possible, biases connected to the questions construction.

First, it must be paid attention to wording, using words that, according to respondents' background, can be easily understood by them. In addition, it is important not using too broad question, such as, for example "are you liberal?".

Each question should be worded so that the respondent understands its meaning and so that the question has the same meaning to each respondent.

Another bias is the response set defined as the tendency to answer all questions in a specific direction regardless their content. This problem may arise when a set of questions is presented together with the same response format, especially when the questions all refer to the same topic. To be avoided, it is possible to create a set of response categories by changing the question format, either by varying the response categories for each question or by distributing questions on a topic throughout the questionnaire instead of placing them all together.

Also leading question must be avoided. This is a question phrased in such manner that it seems to the respondent that the researcher expects a certain answer, such as, for example, "Do you favor or oppose legal abortion?".

Finally, there are the threatening questions that can regard gambling habits, drinking or sexual preferences and that may elicit biased responses. Consequently, it is relevant for researches to first determine whether or not certain questions are threatening by asking respondents to rate question topics as to how uneasy they thought most people would feel in talking about them (Bradburn, Sudman, Blair & Stocking, 1978).

2.3 Pretest

Pre-test is the term used to represent the activity of control of the questionnaire in its almost final version.

² For further information about advantages or disadvantages in using closed-ended questions and open-ended questions see Nachmias & Nachmias (1982)

The use of pre-test has always been considered a good survey practice in order to find out if everything "works" especially when a survey employs new techniques or a new set of questions. Pre-tests can be extremely effective tools and are an excellent way to evaluate if survey questions can be understood and answered by respondents.

Pretesting is crucial for identifying problems not only for respondents but also for the interviewers. On their reports the interviewers can communicate their own or respondents' difficulties with the questions

Usually, pre-tests involve interviewers completing a small number of interviews and being debriefed.

To be effective pre-test should be administered on a sample with similar characteristics to those of the original sample (Cannavò, Fruda, 2007).

Pre-testing can offer feed-back about:

- Usefulness of instructions

The instruction that goes with each question is another element that researchers must consider when constructing a questionnaire. The instruction on a questionnaire starts with a COVER LETTER that explains the purpose of the survey to the respondents and to encourage a high response rate.

The cover letter must succeed in overcoming any resistance or prejudice that the respondent may have against the survey and explain the purpose of the study.

- Clarity of questions

For example, the question as "do you consider liberal?" are too broad. We may refer to the person's education, politics, profession or sex life. An accurate pretesting allows us to avoid this bias, because there will be a lot of "no answer" because the question is confused.

- Exhaustiveness of categories

For example, in the question "What is your occupation?"

- Student
- Employed
- Unemployed
- Retired

Respondents who are households would not fit into above category, so the requirement of exhaustiveness is violated.

Finally, pre-testing can offer feed-back about length of time to complete it.

3. Class-work: from conceptual dimensions to the questionnaire construction

The empirical experience concerned the tourist satisfaction. We decided to analyze this topic because it represents an experience close to their tourist stay in Rome.

Students were divided into two working groups in order to identify the dimensions and indicators linked to the issue above mentioned.

The dimensions detected by the students were synthesized according to some dimensions emerged by the literature review and by the existing studies (Meng, Tepanon, Uysal, 2008).

Table 1 Dimensions and indicators

1st dimension	Indicators
Happiness/motivation	Friendly interaction with local people
	Good accommodation/services/food
	Daily activities
	Weather
2nd dimension	Indicators
Locality	Availability of information that you need
	Natural landscape
	Sightseeing
	Security
3rd dimension	Indicators
Planning	Cost and expenditure
	Length of stay
	Self planning and tourist packages

Starting from these indicators students developed three different questionnaires. At the end jointly with the students we designed the final revised version of the questionnaire.

Some considerations about questionnaire construction came to light during the revision:

1. analyzing well the topic of research through theories and researches within the literature
2. focusing the goal of the research
3. specifying well properties and indicators considered (their meanings must be clear and possibly supported by literature)

References

- Biemer, P.P., Lyberg, L.E., (2003). Introduction to Survey Quality, John Wiley & Sons.
- Bradburn, N. M., Sudman, S., Blair, E, and Stocking, C. (1978) Question threat and response bias. *Public Opinion Quarterly*, 42, 221-234.
- Cannavò, L., Frudà, L.(a cura di)(2007a), *Ricerca Sociale. Dal progetto dell'indagine alla costruzione degli indici*. Carocci, Roma.
- Delbert, C. M. (1991). *Handbook of research design and social measurement*, fifth edition, Sage publications, USA.
- Fink, A., (1995). *The survey handbook*, Sage Publications, Inc., USA.
- Id., (1995). *How to ask survey questions*, Sage Publications, Inc.,USA.
- Id., (1995). *How to design survey*, Sage Publications, Inc., USA.

- Id., (1995). *How to ask survey questions*, Sage Publications, Inc., USA.
- Huh, J. (2002). *Tourist satisfaction with cultural / heritage sites: the virginia historic triangle*. Thesis submitted to the Faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of Master of Science in Hospitality and Tourism Management.
- Krosnick, J.A., (1999). Survey Research. *Annual Review Psychology*, 50, 537-567.
- Meng, F., Tepanon, Y., Uysal, M. (2008). Measuring tourist satisfaction by attribute and motivation: The case of a nature - based resort, *Journal of Vacation Marketing*, 14, 41.
- Nachmias, C., Nachmias, D. (1982). *Research Methods in the Social Sciences*. Edward Arnold, London.
- Neuman, L. W. (1994). *Social Research Methods. Qualitative and quantitative approaches*. Allyn and Bacon, USA.
- Gobo, G., Seale, C., Gubrium, J.F., Silverman, D., (2003). *Qualitative Research Practice*. London, Sage.
- Payne, G., Payne, J., (2004). *Key concepts in social research*. SAGE publication, London.
- Schaeffer, N.C., Presser, S.(2003). The science of asking question, *Annual Review of Sociology*, August 2003, 29, 65-88.
- Scheuren, F., (2004). What is a survey, http://client.norc.org/whatisasurvey/downloads/pamphlet_current.pdf
- Steckler, A., McLeroy, K.R., Goodman, R.M., Bird, S.T., McCormik, L. (1992). Toward Integrating Qualitative and Quantitative Methods: An Introduction. *Health Education & Behavior*, 19, 1-8.
- Stevens, S.S. (1946). On the theory of scales of measurement. *Science*, 103, 677-680.
- Stevens, S.S. (1951). Mathematics, measurement and psychophysics. In S.S. Stevens (Ed.), *Handbook of experimental psychology* (pp. 1-49). Wiley, New York.