MINISTERY OF EDUCATION OF THE REPUBLIC OF BELARUS

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REFERAT:

”Research methods to collect primary empirical information”

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Research methods are strategies or techniques to conduct a systematic research. To collect primary data four main methods are used: survey, observation, document analysis and experiment, but not any of them is adequate or best for all purposes – all should be supplemented and checked.

The most wide-spread method that provides almost 90% of empiric data is survey research. Survey is a poll in which researchers gather facts applying to respondents whose verbal statements are a source of information. Respondents are people who provide data for analysis.

The strengths of surveys are seen in the following: survey research is useful in describing the characteristics of a large population without having to interview each person in that population. It is useful in analyzing social change or documenting the existence of a social problem. It is cheap to organize and makes a maximum use of technical devices to process the obtained data.

A weakness of survey research is that quality of obtained data may be affected by a respondent’s personality – his education, culture, memory, attitudes to the study problem, on the one hand, and the researcher’s personality – his professional level, communicative skills etc., on the other hand.

Survey data are collected by using such methods as questionnaire, interviewing, sociometric survey and expert survey.

Questionnaire is a popular method of data collection with a questionnaire form as a printed research instrument containing a series of items for respondents to answer. It may be self-administered by a respondent or administered by an interviewer in face-to-face encounter or by telephone.

The advantages of questionnaire are well-known: data can be collected fast on specific items; these data can be easily transferred into forms allowing quantified and computerized analyses; the task of data collection can be delegated to less expensive field staff.

However, several problems can arise when using questionnaire. It can impose a rigid, preconceived idea of reality which may be inappropriate for the particular situation. If field enumerators are not supervised properly, errors in recording data can occur. Problems may also arise from respondents concealing, misreporting, or misunderstanding the questions.

The design and preparation of a questionnaire form are extremely important, as they will influence the type of information collected, in somewhat the same way as the mesh-size of a fish-net determines the fish that are caught.

First, the questionnaire form must be strictly designed: it begins with an introduction that should make a respondent interested in participating in the poll; so it informs him about the research aim, way of filling in, guarantees of anonymity etc. The second section is a set of pre-arranged questions. The final part contains demographic data about respondents.

Selecting and phrasing of particular questions is of utmost importance in any survey as their purpose is to discover what people know, not what they do not know. They should follow in a logical order so that the researcher can obtain maximum information, and people should be reminded of aspects on which they might comment. Sometimes it is good to start with a general question, “What do you think about X? ”followed by specific questions. Questions must be carefully phrased so that they can be understood by any respondents who belong to a certain socio-demographic group. They should fit with indigenous knowledge systems, and with local perceptions. The researcher must have enough basic knowledge of the community to know which questions would be meaningful, and how exactly they should be framed so as to minimize the possibility of creating ambiguity or embarrassment.

Besides, the questionnaire form should meet the requirements of validity and reliability. Validity is the extent to which a study or research instrument accurately measures what it is supposed to measure. Reliability is the extent to which a study or research instrument yields consistent results when applied to different individuals at one time or to the same individuals over time.

In questionnaire forms the following types of questions can be used:

* open-ended questions – when a respondent himself formulates the answer, for example, “How did you spend tonight? ”– “I went to the cinema”or “I chatted in the Internet”;
* closed questions – when a respondent is provided with some alternatives, for example, “What do you think of smoking? ”– “It’s bad for health”, “It’s a way of coming down under stress”or “I’m neutral about it”. One and the same question can be made open-ended or closed. Closed questions are easier to computerize, but they need the researcher’s comprehensive knowledge on the issue. Open-ended questions are used when this knowledge is limited;
* semi-closed questions – when a respondent is provided with alternatives and given a chance to express his own opinion on the issue. Normally it’s included as “other”followed by a space for a respondent’s comments;
* scale questions – when a respondent checks a scale (of incidence, preference, or quantity) of 0-5 (1-10 etc);
* menu questions – when a respondent can choose any combination of answers;
* alternative questions supposing to choose only “yes”or “no”answers.

Although the questionnaire ought to cover all questions needed, it should be neither too elaborate nor too long. The number of questions should vary from 25 to 30 as a bigger number creates more accidental and inadequate information because a respondent becomes tired. Consequently, an hour is usually a maximum time period for filling in any questionnaire. Besides, most people have a lot of demands on their time, so they cannot spend too much time on answering questions. Whether to use a closed form (with itemized answers) or an open-ended form questionnaire depends on the researcher’s own needs and requirements.

Where computer facilities are available, it is advisable to frame and code questionnaires so that computer analysis is possible. When the totality of samples is big, such as in a national or other macro-level survey, the use of computers is almost essential. By computer, we refer not only to macro-computers but also PCs, and even some calculators. Manual analysis often can be done quickly and cheaply so that preliminary results are obtained in a few days, instead of waiting at the mercy of the computer for months. When computers are used, a member of the computer staff is recommended to be part of the research team.

Interviewing is a data-collection encounter in which an interviewer asks the respondent questions and records the answers. It is a personal contact between a respondent and an interviewer that differentiates interviewing from questionnaire.

A short-cut method to gather data fast is to interview groups rather than individuals. In applying this method, a problem of representativeness may arise, since any chosen group is unlikely to represent a true cross-section of the local population, although attempts to include individuals of different socio-economic status should be made. The knowledge and experience of several individuals may serve as checks on information given by each others. There is nothing specialized about a group interview as compared to a person interview.

In an interview, it is usual to have a set of questions to ask, and in most circumstances an open-ended type of interview is advised because it allows the conversation to be directed to some extent by the respondent. Closed-forms or standardized interviews, consisting of pre-arranged questions and answers, are seldom the best approach, unless the interviewer already has both extensive, accurate and up-to-date knowledge of the community in general and the energy system. In general, a non-standardized format that allows flexibility is best. The interviewer asks questions from a standardized questionnaire and his task is to record the respondent’s answers in the exact way. Anyway, this kind of interview is complex for both the respondent as it takes a lot of time to think over the question and formulate the answer, and the interviewer who spends a lot of time and efforts to record the answers. Several problems can also arise in processing and decoding the obtained data. That’s why non-standardized interviews are not often used in sociological research, although in some cases they are of great value as they provide most complete, comprehensive, informative answers in a widest range. A semi-standardized interview combines peculiarities of both interviews spoken about.

Sociometric survey is a survey form used in small social groups to discover interpersonal relations between group members by fixing preferences, likings, dislikings etc. The sociometric technique is based on qualitative criteria to measure emotional relations and character of interactions between group members, each member’s status, non-formal group leaders etc. Respondents are asked questions of the type, “Which of your group will you choose for …? ”or “Which of your group will choose you for …? ”The criteria can be formal or connected with organizing joint activities and non-formal or connected with emotional, interpersonal relations, entertainments, leisure time etc.

When members of a group are asked to choose others in the group, everyone in the group makes a choice and describes why he does so. From these choices a description (a drawing, like a map) called a sociogram emerges. The following is a sample of sociogram:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Ann | Bob | Nick | Don | Edna | Fred |
| Ann |  | + | - | 0 | + | 0 |
| Bob | 0 |  | - | + | + | 0 |
| Nick | - | 0 |  | + | + | + |
| Don | 0 | + | - |  | 0 | 0 |
| Edna | + | + | 0 | + |  | 0 |
| Fred | + | + | 0 | 0 | + |  |

Data processing is supposed to build up various matrices which present results in the form of a matrix or table, calculating coefficients as far as the group’s emotional solidarity is concerned etc. Such table is called a sociomatrix:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Ann | Bob | Nick | Don | Edna | Fred |
| TOTAL + | 2 | 4 | 0 | 3 | 4 | 1 |
| TOTAL 0 | 2 | 1 | 2 | 2 | 1 | 4 |
| TOTAL - | 1 | 0 | 3 | 0 | 0 | 0 |
| Total choices received: | 5 | 5 | 5 | 5 | 5 | 5 |
| Not chosen by: | 0 | 0 | 0 | 0 | 0 | 0 |
| MUTUALS: |  |  |  |  |  |  |
| MUTUAL + | 1 | 2 | 0 | 1 | 2 | 0 |
| MUTUAL 0 | 1 | 0 | 0 | 2 | 0 | 1 |
| MUTUAL - | 1 | 0 | 1 | 0 | 0 | 0 |

Expert survey is a survey form conducted to have expertise on the issue. Its distinction is that its respondents are people who are competent in a definite area of knowledge or practice. That’s why expert survey can’t provide any anonymity.

In social research, observation can also be used to collect data. Observation is a method of direct recording of social events and conditions under which they take place. Its advantages are as follows: it allows to record events and elements of human behaviour at the moment they take place; the researcher doesn’t depend on the object of research, he can collect facts, no matter whether or not individuals or groups are willing to respond or able to answer. However, it means some subjectivism as the observer is closely connected with the object of observation and it affects how the observer perceives social reality and interprets the essence of the observed phenomena.

Due to its character, observation can be standardized when a researcher focuses his attention on pre-arranged phenomena most significant for characterizing the situation under study, and non-standardized when such elements are not arranged beforehand.

Due to the observer’s position with regard to the object of research, two forms of observation are differentiated: participant and non-participant. Observation is participant when a researcher is inside the study object. He usually decides beforehand what particular activities are to be observed and recorded, and even the form of the record. Participant observation allows the observer to become an “insider”because he directly participates in the study population’s activities. This permits an understanding of the study population and their activities from their own perspective. Participant can make observation either incognito when the group doesn’t know the aims and objectives of the research or open when the group knows this.

Participant observation has been a major research strategy in anthropology. A classical example is an American sociologist W. Whyte who lived in the block of houses with Italian migrants in one of American cities learning their relations, customs, language, their adaptation to a new culture etc. Another known example is a Russian anthropologist N. Miklukho-Maklai who went to Papua Guinea to learn the indigenous population there.

In non-participant observation, the observer remains separate from his study population’s activities, and attempts to be unobtrusive.

Information on particular social problems may also be available from a variety of documents of official, historical, anthropological, or other character. Analysis of documents is used at every stage of a research: to study a problem situation, to give a comprehensive analysis of the object and its interpretation etc.

A document in sociology is any sign or graphic information fixed by people on any material carrier, for instance, any printed or typed text, pictures, photo - and video-recordings, CDs etc. These important sources of written information may shed light on a community, its history, and patterns of human behaviour, values, norms etc.

Documents are classified according to different criteria: according to their status, documents can be non-official such as private letters, diaries and any documents created by individuals on their own initiative, and official such as documents of various organizations; according to their character, they are primary if created by the author on his own experience, and secondary if created on generalization of primary documents.

To analyze documents sociologists use both non-formalized or qualitative, and formalized or qualitative-quantitative methods. Qualitative analysis means reading documents and interpreting their contents with general logic operations. To avoid subjectivism that may be caused by the investigator’s knowledge, abilities, ideological position etc. while interpreting documents, content-analysis is used. Content-analysis is a formalized method by which the information is transferred into definite quantitative parameters for further interpretation.

Unlike other methods, experiment is seldom used in sociology. Experiments are carefully designed situations, in which a researcher studies the impact of certain variables on the people’s attitudes or behaviour. Experiments may occur in either laboratory or natural setting. In a laboratory experiment, people are studied in a closed setting, so researchers can maintain as much control as possible over the research. Natural experiments are real-life occurrences that provide research conditions such as natural disasters, war or other social trouble.

Experiments require that people should be divided into two groups: an experimental and control group. Members of the groups are matched for similar characteristics to make comparisons between the groups. The experimental group contains people who are exposed to an independent variable (the experimental condition) to study its effect on them. The control group contains people who are not exposed to the independent variable. The experimental and control groups are compared to see whether they differ in relation to the dependent variable, and the hypothesis about the relationship of two variables is confirmed or rejected.

One of the problems that may arise from experiments is reactivity, the tendency of people to change their behaviour in response to the presence of the researcher or to the fact that they know they are being studied.

Experiments have their strengths and weaknesses. The major strength of the controlled experiment is the researcher’s control over the environment and the ability to isolate the experimental variable. Perhaps, the greatest limitation of experiments is that they are artificial. Social processes that occur in a laboratory setting often do not occur in the same way in other settings.

BASIC CONCEPTS

Aim – the final result a researcher wants to get.

Alternative question – a question which supposes to choose only “yes”or “no”answers.

Analysis of documents – an analysis of documents to study a problem situation, to give a comprehensive analysis of the object and its interpretation etc.

Analytical ASR – the deepest type of an applied sociological research which is both to describe structural elements of the study phenomenon and find out causes affecting its character and specificity.

Applied sociological research (ASR) – a sociological research which is carried out to solve a particular social problem.

Closed question – a question when a respondent is provided with some alternatives.

Content-analysis – a formalized (qualitative-quantitative) method to analyze documents by which the information is transferred into definite quantitative parameters for further interpretation.

Descriptive ASR – an applied sociological research which is to get empiric data enabling to make up an integral presentation of a study phenomenon and its structural elements.

Experiment – a carefully designed situation in which the researcher studies the impact of certain variables on people’s attitudes or behaviour.

Expert survey – a survey form conducted to have expertise on the issue, that’s why people who are competent in a definite area of knowledge or practice are invited as its respondents.

Fundament sociological research – a sociological research which is carried out to get new knowledge.

General sample – the number of units with a common feature attributing them to the analyzed entity.

Hypothesis – a statement of the relationship between two or more concepts, the object’s structure, or possible ways to solve a problem.

Incognito participant observation – participant observation when the study group doesn’t know the aims and objectives of the research.

Instant ASR – an applied sociological research which provides information about the state of an object and its characteristics at the moment of its study, or in statics.

Interviewing – a data-collection encounter in which an interviewer asks the respondent questions and records the answers.

Menu question – a question when a respondent can choose any combination of answers.

Methodological part – part of a research design which is to show what is studied (problem, aims and objectives, object and subject of research, hypotheses, basis conceptions etc).

Non-formalized analysis of documents – a qualitative method to analyze documents which means reading documents and interpreting their contents with general logic operations.

Non-standardized interview – a flexible format when an interviewer asks questions from a standardized questionnaire and his task is to record a respondent’s answers in the exact way.

Non-standardized observation – observation when a researcher does not arrange the study phenomena beforehand.

Objective – a totality of definite purposeful orientations which provide additional requirements to analyzing and solving the problem.

Observation – a method of direct recording of social events and conditions under which they take place.

Open-ended question – a question when a respondent himself formulates the answer.

Open participant observation – participant observation when the study group knows the aims and objectives of the research.

Participant observation – observation when a researcher is inside the study object.

Pilot ASR – an applied sociological research which is to check up how a basic ASR is prepared.

Problem situation – a contradiction between knowledge of people’s needs in some actions and lack of ways, methods and means of realizing such actions.

Proceeding part – part of a research design which is to show how to study (applied methods, sample etc).

Random sample – the number of units from a general sample that a researcher is to put under study.

Reliability – the extent to which a study or research instrument yields consistent results when applied to different individuals at one time or to the same individuals over time.

Repeated ASR – a study of one and the same object or objects carried out over a period of time or at several different points in time under same or different conditions, or in dynamics.

Research design – a part of an ASR which gives theoretic grounds for methodological approaches, methods and techniques of learning the object and subject of research; it consists of methodological and proceeding sections.

Respondent – a person who provides data for analysis.

Questionnaire – a method of data collection with a questionnaire form as a printed research instrument containing a series of items for respondents to answer.

Scale question – a question when a respondent checks a scale (of incidence, preference, or quantity) of 0-5 (1-10 etc).

Semi-closed question – a question when a respondent is provided with alternatives and given a chance to express his own opinion on the issue.

Social monitoring – an integral system of getting social information about the phenomena and processes taking place in the society; it is designed to fix, keep and make primary analysis of the obtained data.

Sociological monitoring – an integral system to monitor changes taking place in the society, which is based on study and analysis of mass conceptions about these changes.

Sociometric survey – a survey form used in small social groups to discover interpersonal relationships between group members by fixing preferences, likings, dislikings etc.

Standardized interview – a closed form consisting of pre-arranged questions and answers.

Standardized observation – observation when a researcher focuses his attention on pre-arranged phenomena most significant for characterizing the situation under study.

Statistical monitoring – a system of getting quantitative characteristics (statistical indices, parameters, coefficients etc) of different sides of the society.

Survey – a poll in which researchers gather facts applying to respondents whose verbal statements are a source of information.

Validity – the extent to which a study or research instrument accurately measures what it is supposed to measure.

Variable – a concept with measurable traits or characteristics that can change or vary from one person (time, situation, or society) to another.

Additional literature

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