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TRAINING OF SURVEY PERSONNEL

C O N T E N T S

	<u>Paragraphs</u>
TECHNICAL MANAGEMENT STAFF	3 - 13
CARTOGRAPHIC STAFF	14 - 15
FIELD STAFF	16 - 23
DATA PROCESSING STAFF	24 - 32
CONCLUSION	33

1. Staff training is of cardinal importance in conducting a survey. Indeed, the experience has been that some surveys were doomed to failure as a result of poor staff training.
2. A survey staff generally includes technical management, staff, cartographic staff and field and data processing staff.

Technical Management Staff

3. The professional staff is responsible for the design, organization and implementation of the many and varied operations involved in a survey. The Technical Director should be a senior statistician with several years experience in the organization of surveys. He should be assisted by two or three qualified statisticians with a good knowledge of and practical experience in survey methods, sampling techniques and data analysis.
4. It should be pointed out that the best training for survey statisticians consists in the acquisition of practical experience in the planning and conducting of surveys and the analysis of results. It might, however, be necessary to plan further training for statisticians who will be responsible for the technical management of a survey.

5. There are several centres outside the region for this kind of training. Among them is the International Statistical Programmes Centre (ISPC) of the US Bureau of the Census. This Centre organizes courses in and disciplines as sampling and survey methods, agricultural surveys and censuses and economic surveys and censuses. A full course lasts one year, but it is possible to take part of a course as shown on the schedule prepared for the sub-programme chosen. The courses are conducted in English.
6. In 1977, the Munich Centre for advanced training in applied statistics for Developing Countries set up two retraining courses in household surveys, one in English and the other in French. Each training course lasts about four months. This centre attempts to provide courses in the practical application of statistical methods suitable for use in the special conditions in developing countries, in the review of theory and in new methods. In view of the interest in household surveys, shown by African countries, the Centre will probably continue to include such training courses in its curriculum.
7. Courses dealing specially with sampling techniques are offered in universities and institutes such as the University of Southampton in the United Kingdom; the University of Michigan at Ann Arbor, USA; the Asian Statistical Institute in Tokyo and the Indian Statistical Institute in Calcutta.
8. Some agencies dealing with statistics in the developed countries admit technicians from developing countries and provide them with practical training. One such agency is the institut national de la statistique et des études économiques (INSEE) in France.
9. Where training in the region is concerned it has been recommended that centres participating in the Statistical Training Programme for Africa (STPA) should lay greater emphasis on household surveys in their educational programmes. If this proposal is adopted statisticians with a more profound knowledge of surveys will eventually become available. It is also envisaged that these centres will organize short training sessions in the form of workshops and seminars. User countries will be informed in good time concerning the programmes set up by the various centres for this purpose.
10. It might also be possible to arrange study tours in African countries in which surveys are underway in fields of interest to countries seeking assistance. This approach was attempted during the 1970 round of population and housing censuses and it would be desirable to follow it in the African Household Survey Capability Programme (AHSCP).
11. Another possibility is to ask for aid from countries with substantial experience in surveys. Specialists from such countries could examine on the spot problems with local technicians. This method was used in 1978 during the urban household income, expenditures and consumption survey conducted in Madagascar, when the Director General of Statistics of Tunisia came to Antananarive to help national statisticians in the sample design for the survey.

12. These two approaches to training possibilities fall within the category of the current efforts to promote technical co-operation among developing countries.

13. It should also be pointed out that regional working groups are of great importance in the training of technical staff since such meetings give participants an opportunity to compare their experiences and to work together in devising the best methods of approach in African conditions. Lastly, it should be noted that one of the tasks of United Nations experts assigned to specific country projects and ECA regional advisers is to train local staff. This task should not be neglected either by the experts in question or by national authorities.

Cartographic Staff

14. To obtain reliable results from a survey, it is necessary to have a good sampling frame. In this connection, cartographic work must be carried out to demarcate the geographical units from which the basic units for collecting data will be selected.

15. In most African countries, there are staff members who were trained in cartographic operations during the 1970 round of population and housing censuses. It would be highly desirable to use the same staff in updating the cartographic material needed for the household surveys. It would be enough to give such personnel a refresher course designed on the basis of the objectives of the survey to be conducted. It should be recalled that the cartographic staff is generally made up of geographers, cartographers, draughtsmen and cartographic assistants.

Field Staff

16. The field staff is generally made up of interviewers, controllers and supervisors.

17. Since the objective of AHSCP is to develop permanent survey capabilities, including field operations, field staff should be available for the successive survey rounds which are part of an integrated programme. By participating in these surveys they will accumulate experience. There is no doubt that appropriate training is necessary if the staff is to understand the objectives of each survey, the methods to be used in it, the content of the questionnaires, etc.....

18. Where there is not as yet a permanent field survey organization, steps should be taken to recruit and train the required field staff.

19. Let us take for example a country with 3 million inhabitants and an area of 500,000 square kilometers. To conduct a household survey in such a country, about 10 supervisors, 50 controllers and 200 interviewers should be mobilized.

20. As far as possible, supervisors should be taken from the middle level staff of the Bureau of Statistics (diploma and certificate holders). They should be trained by the professional staff of the survey. The training should be as thorough as possible and designed to ensure that the supervisors acquire knowledge relating not only to their own organizational and supervisory functions but also to those of their subordinates.

21. Controllers should, if possible, also be recruited from the middle level personnel of the Bureau of Statistics (especially certificate holders). Because of the shortage of statistical personnel in many African countries, it may be necessary to make up the number of controllers by recruiting new persons. Recruitment should be almost at the secondary school leaving certificate (O level). Controllers should also be trained by the professional staff of the survey, who should be assisted in that task by the supervisors. The training of controllers covers the technical and practical aspects of conducting a survey with emphasis, on control of the number and quality of documents filled in by the interviewers.

22. In general, interviewers are recruited at the primary school leaving certificate (i.e. completed 6 years of formal education). They should be at least 18 years of age and possess the physical stamina needed for field work. In some countries women are preferred, especially for surveys in urban areas, for they are considered to be more persuasive than men particularly when it comes to asking questions on income and household expenditures. Interviewers are trained by the professional staff of the survey with the assistance of the supervisors and controllers. The training consists mainly of introducing the objectives of the survey and explaining the content of the questionnaires. This theoretical training should be followed by practical training in the field and discussion sessions on the problems encountered.

23. The duration of the training of each category of staff varies depending on the complexity of the survey to be conducted and the presence or absence of constraints in the area to be surveyed. It generally lasts two to three weeks with at least half of that time spent in field work. The final selection of candidates should not be made until all the training has been given.

Data Processing Staff

24. The data processing staff includes editors and coders, punch operators and specialists (programmers, analysts, systems specialists, etc.).

25. The editors and coders are respectively responsible for the editing, and coding of files. In the context of AHSCP, it is suggested that the field staff be used for these tasks during slack periods. However, some countries prefer the centralized system. The training of such staff should be designed in such a way as to give them the spirit of method and classification.

26. The punch operators should be trained in the use of the data entry equipment chosen for the survey. In recent years, many African countries have opted for the recording of data on diskettes (flappy disks) or magnetic tape instead of the usual punch cards. The staff needed for this purpose can be trained locally without any difficulty with the necessary equipment.

27. The training of programmers or/systems raises more problems because it must be planned long in advance so that the trainees will be fully operational when data processing activities start.

28. There are several training centres for these specialists both in Africa and outside the region.

29. In Africa, the "Institut africain d'informatique" (African Data Processing Institute) set up in Libreville (Gabon) in 1971 trains programmers in two years and analysts in three years. The institute also organizes short-term courses for the information and training of users. The Centre d'études et de recherches en informatique (Data Processing Research Centre) in Algiers trains programmers, analysts and engineers.

30. It should be noted that the centres participating in the Statistical Training Programme for Africa (STPA) offer their students courses in data processing, and consideration is being given to the possibility of improving these courses to give future statisticians a chance not only to converse with data processing personnel but also to solve their own problems. One of these centres, the "ecole de statistique d'Abidjan", included data processing among four optional subjects for third year students in its ingénieur des travaux statistiques (degree) course.

31. Outside Africa, there are many centres which the training data processing personnel, including the International Statistical Programmes Centre (ISPC) of the US Bureau of the Census in Washington which offers practical courses in data processing systems, with particular reference to census and survey data.

32. Lastly, it should be pointed out that ECA plans to organize in 1983 a training session in the use of statistical software packages in relation with the editing and tabulation of census and survey, data and vital statistics. There is no doubt that this training session will be useful to countries engaged in the operations that have just been mentioned.

Conclusion

33. The training of all levels of survey personnel should be carefully planned in advance so that the many and varied operations proceed according to schedule without a hitch. The success of a survey depends heavily on the kind of training provided. That is why it has been suggested that the professional staff of a survey be responsible for staff training at all levels. This will put them in direct contact with all the personnel engaged in the survey.