

Measuring Livelihoods and Environmental Dependence

Methods for Research and Fieldwork

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Chapter 10

Hiring, Training and Managing a Field Team

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You are only as good as the people you hire.
Raymond Albert Kroc (1902–1984)

Introduction

Even with a theoretically and empirically sound questionnaire, there are practical aspects of survey implementation that can significantly affect data quality and a research project's cost-effectiveness. Most household level socio-economic surveys involve the interaction of researchers, respondents and enumerators. Each of these interactions is an opportunity to collect high quality data but also presents opportunities for data quality to be compromised. Field researchers must pay explicit and serious attention to human resource development and management, project management and social capital building. This chapter addresses three aspects of field research that seldom receive focused attention: (a) hiring and training the field team; (b) managing and motivating the field team; and (c) putting into place good questionnaire management procedures. These skills help field researchers develop strategies to mitigate common problems including: inadequately trained enumerators; enumerator attrition; communication problems or conflicts between researchers, enumerators and respondents; missing or incorrect data filled in on questionnaires; and loss or theft of questionnaires. The limited available information on these issues is scattered across grey literature (for example, FAO, 1995; Hoare, 1999; PEN, 2007), websites (for example, NASDA, 2010; WCSR, 2010), older books (for example, Devereux and Hoddinott, 1992; Poate and Daplyn, 1993; Puetz, 1993; Vemuri, 1997) or more rarely in peer-reviewed papers (for example, Ross,

1984; Whittington, 2002). See Chapter 11 for a discussion of operational criteria for assessing data quality, including biases that may arise when using enumerators.

Hiring a field team

The selection and training of enumerators is central to the quality of data collected. Unless a researcher has a relatively high level of proficiency in the local language and a relatively small sample size, she is going to need people to help implement field surveys. Putting together a good team, then training and managing that team are big challenges, particularly for first-time researchers. There are several critical factors that strongly influence the selection of enumerators including: level of education; desired language skills; prior experience with socio-economic surveys; local knowledge of the region or communities where fieldwork will be conducted; and research budget.

We distinguish two types of enumerators: *external* enumerators, who are university students or recent university graduates (local or non-local) or local professionals in non-governmental or governmental organizations, and *local* enumerators, who are often members of the community where the research is being carried out. The decision to hire external or local enumerators is not a trivial one. The main advantage of using external enumerators is that their education and experience is expected to improve the quality of data collected. External enumerators may already have relevant research experience and a high degree of familiarity with collecting complex socio-economic survey data. They are likely to require less training than local enumerators who have usually not collected field data before. Also, external enumerators may have extensive field and/or research experience in the study region, along with personal connections in rural areas, allowing them to help contribute to both sound data collection and the logistics of fieldwork.

The main disadvantage of hiring external enumerators is the cost: generally, external enumerators command higher wage rates and there are potentially high costs associated with transporting the field team to the study site. Logistical considerations should not be underestimated: time required to travel to remote survey villages can reduce the time spent in the study area collecting high quality data. One way to reduce time and transportation costs is to have enumerators spend weeks at a time in the study villages or to work there on a permanent basis throughout the survey. A likely second constraint associated with hiring external enumerators is a lack of knowledge regarding the study site, so extra time and energy will be needed to gain local trust and insight into local conditions.

The major benefit of hiring local enumerators is their in-depth knowledge of the local area. They can provide relatively quick access to local information not readily available to outsiders, including information regarding illegal activities, and they are generally very conversant about local conditions and customs. The use of local enumerators reduces costs of salaries and the logistics of arranging transportation and accommodation. This is particularly helpful when research sites are remote and/or households are scattered over large geographical areas. The disadvantage is that their educational skills are generally lower and therefore more time needs to be spent on training. Also, a potential limitation of employing local enumerators is that some information may not easily be shared among neighbours, such as the value of hidden assets or issues related to conflict over natural resources.

In hiring either external or local enumerators, it is critical to decide whether to rely on recommendations from colleagues (for example, social networks, professional colleagues, schools, churches or non-governmental organizations (NGOs)), or to undertake a meritocratic hiring process that includes advertising the job and interviewing the most qualified candidates. There are strong arguments for either approach. Asking local collaborators for enumerator recommendations can provide quick identification of strong candidates. However, the downside, especially in the case of local enumerators, is the risk that recommendations are motivated by family relationships, ethnic ties, and so on. Employing local enumerators introduces attractive opportunities for local people to generate significant income, which may induce locally prominent people to influence the selection process. The challenges of applying a merit-based approach to hiring enumerators are twofold: the process may be unfamiliar or inappropriate in some settings; and it may be difficult to evaluate local references. Regardless of the identification procedure, all candidates should be screened through interviews before initiating training.

Researchers with a large number of enumerators (three or more) may want to consider hiring a more experienced team member to help supervise the team. An enumerator supervisor should have more significant responsibilities and should receive a higher salary. Having someone that understands the local context well, can serve as an ombudsperson between researcher and enumerators, and can help check questionnaires in the field can be tremendously valuable. A good assistant can also be a valuable partner in discussions regarding practical or methodological challenges. An obvious downside to having an enumerator supervisor is the additional cost to the research project. There are also potential challenges for enumerators taking direction from two people; researchers need to ensure that enumerators are provided with consistent feedback on how they are collecting and coding data.

Training enumerators

Training enumerators is an often overlooked area of survey implementation. There is a tendency to want to get into the field as quickly as possible, which often results in poorly designed questionnaires, poorly trained enumerators and compromised data quality. The time required to train enumerators depends on their level of education and experience. For example, a highly educated team with some experience implementing field surveys can be trained in one week, while a less experienced team may need two weeks to understand, internalize and develop confidence in implementing the questionnaire (Whittington, 2002).

Pretesting the questionnaire with enumerators is a critical part of the research process. We recognize the chicken and egg problem inherent in pre-testing questionnaires and training enumerators: if the researcher does not speak the language that surveys will be conducted in, it is hard to pretest questionnaires unless she has at least one trained enumerator to administer the questionnaire. Ideally enumerators should be trained so that they can confidently administer the questionnaire for the pretest. The pretest process involves adjusting the questionnaire to local conditions based on information gathered during reconnaissance visits, key informant meetings and feedback by enumerators. If you are translating the questionnaire into the local language, which is generally a good idea, it is essential to make sure that all questions have retained their original meaning. Work with the enumerators on translating questions into the local language until all questions can be put across clearly and correctly. One possible exercise is to use two enumerators to do double translations: one translates from the language of the researcher to the local language, and the other independently translates from the local language back to English. If the question is understood to have the same meaning, the translation is acceptable. Questionnaires should be pretested to obtain a wide range of responses to survey questions. The objectives of pretesting are to make sure that questions are correctly understood (that words and phrases make sense for a given local context), and that options for each question fit the local context (that they adequately capture the range of possible responses). The number of pretest interviews depends on how well the questionnaire is adapted to the local context, but plan to test the questionnaire in at least 6–10 households and 1–2 villages that will not be included in your study sample (PEN, 2007).

The time it takes to answer the entire questionnaire during pretesting may seem prohibitively long and it is tempting to start shortening the questionnaire by cutting questions. The actual interview time will, however, be much shorter as enumerators gain experience with the questionnaire. It is important to remember that, in some households, sections might be skipped (for example, no member of the household has worked as an off-farm labourer). Expect the time

required to administer questionnaires to drop by roughly a third as your enumerators gain experience. The researcher, field supervisors and enumerators should test the questionnaire until it is thoroughly revised, and until each enumerator thoroughly understands each question. The researcher should attend at least one pretest interview with each enumerator to be sure that the interview technique is up to the required standards and that questions are being asked in a consistent manner across enumerators.

As a general rule, pretesting should never be done in the households, villages or other units included in the study sample. In cases where only household surveys are being administered, it is alright to pretest the questionnaire with households that fall outside of the study sample but reside in the same village. However, pretesting should be done with people that resemble the target sample. Look for locations that are as close as possible to the selected research site and reflect variables of interest, such as market access, population density, agricultural potential, land tenure, ethnic diversity, forestry activities, proximity to protected areas, and so on.

Pretesting is not just about improving the questionnaire, it is also essential enumerator training. Enumerator training generally involves a variety of activities before going to the field. These include: reviewing the questionnaire(s) to make sure that all questions are commonly understood; role playing in small groups with teams of enumerators asking questions and recording responses; and role playing in larger groups with enumerators observing each other and giving feedback. Training should also include sessions on the overall objectives of the research project, research ethics, how to conduct yourself in the field, how to deal with difficult or uncomfortable situations, how to deal with problem respondents, the rationale and objectives for pretesting the questionnaires, how logistical issues related to survey implementation will be dealt with, protocols for checking questionnaires in the field, expectations about performance and a review of the project work plan. Pay enumerators for their time spent training and, if the research budget allows, train more enumerators than needed so the top candidates can be selected at the end of the training session. A suggested schedule and topics for enumerator training is described in Table 10.1. The schedule can easily be extended to two weeks by increasing the amount of time for each activity and covering fieldwork protocols that will strengthen the performance of enumerators in the field. We suggest including several group sessions that involve researcher-led lectures and discussions of various aspects of fieldwork.

Taking trained enumerators to the field and having them interview several respondents (outside the sampling frame) is a valuable opportunity for the enumerators to get acquainted with how the entire questionnaire works in practice. Pretest the questionnaire first as a large group and then later in smaller

Table 10.1 *Proposed training schedule for enumerators with prior experience*

DAY	Morning	Afternoon
1	Overview of research project (relevance, questions, hypotheses). Introduce main sections of questionnaire(s), review and clarify enumerators' understanding of rationale for main sections covered.	Section by section review of questions (<i>update questionnaire in response to enumerator feedback on the appropriateness and feasibility of questions</i>).
2	Section by section review of questions (<i>update questionnaire in response to enumerator feedback on the appropriateness and feasibility of questions</i>).	Session on research ethics (including ensuring the anonymity of respondents) and how to conduct yourself in the field.
3	Discussion of updated draft of questionnaire(s). Session on recording responses and protocols for checking questionnaires in the field.	Role playing of questionnaire in small groups (<i>observation and feedback by researcher, checks enumerator coding of responses</i>).
4	Session on dealing with uncomfortable situations or problem respondents in the field.	Role playing in larger group with enumerators observing one another and giving feedback (<i>researcher provides iterative feedback, checks enumerator coding of responses</i>).
5	Session on performance expectations and performance reviews.	Role playing in larger group with enumerators observing one another and giving feedback (<i>researcher provides iterative feedback on role playing, checks enumerator coding of responses</i>).
6	Review the work plan for fieldwork (including conducting the pretest), objectives, need for enumerator feedback, logistics. Presentation of training certificates.	

Note: Training time will need to be increased if: (a) the researcher does not speak the local language (to allow for clarification and training of the research questions in the language in which the questionnaires were created and again in the local language); and (b) the enumerators have little or no previous experience in applying socio-economic surveys.

groups, under the researcher's supervision, until enumerators feel confident about conducting interviews on their own. In particular, enumerators should become familiar with how to deal with a wide variety of responses to questions and challenges that appear when implementing them in a local context. Rehearsals are also critical to enable enumerators to conduct the interview in a less formal atmosphere. Train the enumerators to purposively vary the way the interview is conducted according to how information is conveyed by the respondent. Conducting interviews in a non-mechanical fashion puts

respondents at ease and can significantly improve the quality of data collected. Anticipate several interviews before enumerators acquire these skills.

Scheduling an opportunity for enumerators to practice questionnaires in a field setting can also provide valuable insights into how enumerators will perform during fieldwork. If you hire external enumerators, they may have spent only a limited amount of time in the field and find the conditions difficult to deal with. Observe the body language of the interviewer: good enumerators show an attitude of being present and genuinely interested in the respondents' replies. They also make it clear from the onset of the interview that the information given is valued and appreciated.

Training is a gruelling process for all involved. Repeatedly going through and discussing each question at length, then making sure there is a common understanding of the question being asked requires sustained concentration by all parties. In general, if enumerators are confused by a question, then respondents will also be confused. Training should be viewed as an opportunity to gain the insights of people who may be familiar with the field setting and context, and conversant with respect to the feasibility of asking the questions you want to ask. An important part of training is to let enumerators gain their first experiences with the questionnaire through asking each other questions and by thinking through the possible responses to questions.

A final word with respect to enumerator selection is that sometimes the least educated and/or experienced enumerators turn out to be the best. Researchers should observe trainees closely during the training and early fieldwork process and remain open-minded regarding the potential for building human capital in relatively inexperienced enumerators.

Managing a field team

After hiring, training and pretesting, the research team is ready for the field. The big challenge ahead is to ensure that the enumerators remain committed to the research project and to collecting the highest quality data possible. There are several important things that the lead researcher must do: build team spirit by demonstrating commitment to the research project by spending time in the field; set clear objectives for enumerators, including how their performance will be evaluated and how good performance will be rewarded; and treating enumerators with respect. The goal is to retain the trained enumerators throughout the duration of the project, which should result in the collection of high quality data. Having to train replacement enumerators can be very disruptive to the scheduled research and may affect team dynamics resulting in poorer quality data collection.

Enumerators gauge their dedication and enthusiasm for the research project by their perception of the researcher's level of commitment. We stress the importance of spending time in the field, participating in surveys, struggling through the gruelling conditions and long days, and establishing a relationship of mutual trust and respect with the field team. Though we have no empirical basis for this statement beyond our collective experience, we think that this may be one of the most important determinants of high quality data collection. As a manager of a field research team, it is essential to communicate clearly and often with enumerators, for example, they will have questions that need to be answered, suggestions for how to improve the data collection or possibly even problems with respondents or other enumerators that need to be resolved. The simplest advice for sound communication is to be available to listen to the enumerators, and to make them feel heard and respected. Conducting regular meetings with the research team while in the field is useful for clarifying questions with the entire group. Through clear communication, both researcher and enumerators can learn from and adapt the research process to promote high quality data collection.

It is important to clarify expectations to enumerators early in the research process. The researcher should communicate expectations regarding the number of questionnaires that they should be able to complete within a given time period, and also set clear quality standards. This requires participating in interviews and paying close attention to how enumerators are recording responses. Providing constant feedback and checking questionnaires for completeness and appropriate coding of responses should occur throughout the duration of the fieldwork. If the research budget allows, consider a system of salary increases and bonuses for work well done. Enumerator salaries should be perceived as fair in the context of local market conditions. We caution against paying too high a salary as this might distort market conditions and increase expectations for enumerators who will work with future researchers. Researchers should use particular caution when employing local enumerators as high salary levels can lead to envy and conflict within communities. A good starting point is slightly above the local wage rate appropriate to the level of enumerator education. We recommend slightly higher as fieldwork often has hardships associated with it: people may be away from their families for extended periods, working under harsh and/or physically demanding conditions, and working for longer hours than the standard work day, and so on. We recommend having each enumerator sign a contract that specifies the terms of reference, salary and details regarding health insurance, days off, overtime pay, and so on.

Dealing with problem enumerators is a difficult issue. Three common problems are: enumerators that have poor communication skills and thus do not work well with respondents; enumerators that have trouble understanding some of the questions on the questionnaire and/or recording responses accurately; and

enumerators that fabricate data. To detect such problems early on, consider pairing enumerators in the first week of data collection. This allows them to help each other and cross-check to develop good practices. Once things are running smoothly (and it is clear that all enumerators are competent) then they can begin to work alone. Another possibility is to let a weaker enumerator shadow a very good enumerator for a couple of days to learn about how to deal with respondents, how to ask questions and how to record responses. It is also possible to regularly schedule co-interviews where two (or more) enumerators do interviews together to ensure continued consistency. The third problem of enumerators who fabricate data and violate random sampling protocols – by, for example, interviewing households that are spatially closer than the selected households – is very tricky. Enumerators can be given a stern warning followed by a second chance. However, if it is reasonable to believe that the enumerator will not adhere to the team's data collection standards, they should quickly be replaced. The cost of finding out that an enumerator is incompetent can be unacceptably high if the discovery is made after the enumerator has interviewed a large number of households. Quick decisions can save data and money. Penalizing enumerators who violate data collection protocols also sends a clear message to other team members of the importance of adhering to standards for data collection and quality.

Finally we emphasize the importance of listening to enumerators. This is particularly important if the researcher does not speak the local language; enumerators are the conduit between the researcher and respondents and their experience is critical to data collection and data quality. Enumerators may reveal that some questions are difficult for respondents to understand, or that they feel respondents have a systematic bias in their responses. For example, if timber harvesting is illegal in the study area, enumerators may have the best sense of whether or not respondents are providing accurate information when they report figures on the quantity and value of timber harvested. Researchers should also listen carefully to enumerators as a way of assessing their morale. When enumerators get fatigued and/or overwhelmed by the workload, it is important to address concerns and take mitigative action. For example, taking them out for dinner, giving them a few days off, breaking early one day and going swimming; playing football or doing some other fun activity at the end of the day can boost morale and break up the monotony of fieldwork.

Good questionnaire management in the field

Before leaving for fieldwork, finalize questionnaires and have them printed. Think about practical issues such as how to pack and store questionnaires so

that they do not get dirty or wet. This includes providing enumerators with appropriate field equipment for keeping questionnaires dry (for example, providing enumerators with plastic envelopes; zipper-locked bags; rain ponchos; and waterproof rucksacks) and minimizing the impact if questionnaires do get wet (for example, by using pencil or waterproof pens for recording). Another important issue is making sure that questionnaires will not get lost or stolen. Establish a system for keeping track of questionnaires as they get distributed to team members and have a plan for storing questionnaires in a secure place. Each questionnaire should have a unique identifier and it is a good idea to pre-number questionnaires before handing them out to team members, ensuring that duplicate questionnaire numbers do not occur.

After enumerators have conducted interviews, there is a lot of work to be done to check questionnaires. To minimize problems of missing data, incorrectly recorded responses, and so on, it is very important to devote considerable time to checking questionnaires in the field. Several systems can be implemented to check questionnaires. In Table 10.2 we present an example of a system for checking for data completeness and quality.

Detecting data problems takes time and practice. Missing or miscoded data are relatively easy to identify; more nuanced are responses that just do not seem feasible – for example, a household that has a very large livestock endowment but has very low livestock income. After spending some time with enumerators and respondents, researchers gain a better sense for which responses are feasible and what information appears odd or infeasible. In particular, researchers should check that the recorded data are consistent with other information provided in other parts of the questionnaire. This process of validation is

Table 10.2 *Protocol for checking questionnaires*

Timeline	Task
Day of interview	Enumerator conducts interview and records responses.
Evening of interview	Enumerator reviews questionnaire to make sure responses are recorded/coded correctly. Researcher reviews questionnaire and flags missing data; miscoded data; values appearing to be outliers; and other issues.
Day after interview	Enumerator resolves flags either by recall of interview or revisiting household. Researcher checks de-flagging, confirms that questionnaire is complete. Questionnaire is packed in dry secure place until data entry.

referred to as triangulation (see Chapter 11 for a detailed discussion of interview bias and how to deal with it). Incorporating multiple questions to elicit data for important issues helps with assessing the quality of information and allows triangulation. Evaluation of responses with the enumerator helps with detecting any inconsistency between response and recording. Finally, train enumerators to provide a response for every question. If there are blank spaces in a questionnaire, it is impossible to know if it is because the question was not relevant, the respondent refused to answer or the enumerator simply missed asking the question. It is important to have clear coding protocols for not applicable and missing responses (for example, -8 = Not applicable, -9 = Missing). All researchers should implement a system of flagging or colour-coding potential problems in questionnaires. Some researchers use small Post-it notes to 'flag' and write notes related to missing, miscoded or inconsistent data. Others write notes in the questionnaire using different coloured pens. As enumerators address each of the issues, either by recall of the interview or by revisiting the household, they can check off or respond to the queries. When the researcher reviews the questionnaire the second time, she can remove the flags or include a special mark on the coloured text, signalling that the questionnaire has been completed to the required standard of data quality.

Conclusions

Hiring and training a competent and dedicated field team is essential when undertaking complex socio-economic surveys: the team will strongly influence the quality of collected data. In assembling the field team, the decision to hire external or local enumerators is based on researcher skills, the research objective, budgetary constraints, and so on. Researcher engagement in the fieldwork at all levels is essential. Enumerators will take greater care in their data collection efforts if they find that the researcher is invested in the process. This may mean extraordinarily long days in the field as the researcher participates in interviews and checks questionnaires in the evenings. Every questionnaire needs to be carefully checked for missing values, inconsistent data, outliers, and so on, while research teams are in the field. Training is an ongoing process through researcher monitoring and communication with enumerator teams in the field. Hard work will result in higher quality data! Finally, researchers should respect enumerators and take seriously their feedback on the questionnaire, respondent reactions to questions, and so on. Enumerators are on the front line of the research and have the best knowledge regarding how respondents are interpreting the survey questions.

Key messages

- Take great care in hiring enumerators and plan for at least one week of training, translation and pretesting before starting data collection.
- Respect enumerators and work hard to maintain their commitment throughout the entire data collection period.
- Establish operational field-level protocols for data collection and management.

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