

NIGERIA DATA COLLECTION

LESSONS ON ENUMERATOR TRAINING

**SUSTAINABLE ENGINEERING LAB
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Nigeria's OSSAP-MDGs CGS office (OSSAP), as many other agencies around the world, uses a cadre of temporary, short-term enumerators to conduct facility-based surveys. Historically, OSSAP would centrally train enumerators in Abuja over two days using a classroom format of PowerPoint lectures to transfer knowledge, as well as an organized field visit to a facility for everyone to witness and participate in a facility survey. After training, the enumerators were deemed fully capable without any testing or evaluation to assess comprehension or competency.

As recently as February 2014, OSSAP and the Sustainable Engineering Lab (SEL) provided a centralized training without any post-training testing for a facility-based survey to a group of 120 enumerators. After the training, participants were sent out to conduct a 5-day pilot survey. Concurrently, back-checking of the survey results revealed serious data quality issues. Essential data as simple as the facility ID was being entered incorrectly nearly 20% of the time, which was completely unacceptable¹. These concerns led OSSAP to quickly and completely rethink its training approach to make sure that these data quality issues would not be carried over to the actual survey effort.

And so, in collaboration with SEL, a second round of training was held in Abuja that included testing and evaluation of every participant. Recommendations for hiring would be based primarily on test scores. This testing and evaluation process proved to be enormously impactful and was widely appreciated by the OSSAP team as an effective way to objectively evaluate their enumerators. The hope being that this will lead to improved data quality of the survey effort.

The following is a brief overview of the most interesting aspects of the testing and evaluation process.

Training:

In March 2014, OSSAP invited more than 500 people from across Nigeria to Abuja to participate in two days of training for a chance to be hired as an enumerator for a health and education facility inventory survey. Our objectives, as SEL, were to adequately train the entire group of trainees and to identify at least 400 suitable candidates for hiring by OSSAP. This was a tall task given that many of the participants had never worked as enumerators in any capacity and only about 30% of the participants had been enumerators for previous OSSAP survey efforts. The only education requirement to be a participant was to have completed some basic post-secondary school education, and there was no requirement for education or health expertise. Given this lack of sector expertise, the training materials and survey instruments (see "Authoring simple surveys") were tailored in such a way that a generalist without any specific sector knowledge could easily understand the questions and expected responses.

The training was broken up into two separate two-day sessions: one for 252 people from the three southern geopolitical zones, and one for 277 people from the three northern zones. Both groups were taken through the same training sessions over the two days. On the first day of training, each of the participants was provided with an Android smartphone. Each session

¹ The facility ID is a unique 4-letter code that exists for each facility. Each enumerator is sent to the field with a list of facilities with facility IDs. The 4-letter ID must be correctly entered into the phone to correctly link the survey data to the correct facility. Basically, this entails entering 4 letters into the phone without making a mistake.

included training from OSSAP and the SEL team on the roles and responsibilities of the enumerators, smartphone operation, detailed technical survey content with a particular focus on the most error-prone questions from the pilot exercise, and two mock survey exercises (see below). The main difference between this training and the previous trainings that OSSAP had provided was the inclusion of testing and evaluation.

Testing and Scoring:

At the close of the first day, participants were asked to choose a partner, complete a mock education survey on their smartphone and upload their responses to the server. Each person pretended to be the enumerator for one script and then the respondent for the other script. The mock survey scripts and facility lists were created by the SEL team to simulate a realistic survey interaction. Since the answers were known, it was very simple to generate the answer keys and to score the tests. For clarity, here are the first few questions of one of the scripts:

Script #1
You are trying to find a school called “**Low Cost Islamiyya**” in **Bodinga LGA, Sokoto State**. Please use your facility list and the mock responses below to complete the survey.

1. Enumerator: In which Zone is this facility located?
Respondent: North West Zone

2. Enumerator: In which State is this facility located?
Respondent: Sokoto

.....

Survey responses were analyzed and results were separated into 2 main categories: 1) tests with 100% correct responses or 2) tests with incorrect ID responses (representing the most serious error). Results were shared the following morning in front of the entire training group. This proved to be very captivating, motivational and reinforced to everyone that their results were being monitored. It also provided a learning opportunity for the ID errors since most participants made similar mistakes and so we could show the entire group the types of common mistakes to avoid. Results from this first test were then discarded and not used for evaluation purposes.

Evaluation was based upon results from the second mock survey exercise, proctored midway through the second day of training. Participants were clearly informed that their successful recruitment depended on their final test results and that the first day’s test scores were being thrown out. Given that attention to detail is critical for survey data quality and that the mock scripts were taken directly from the training material, it was expected that most participants would score 100% on the exam. Recommendations for hiring were made for all those participants who scored 100% or missed only one question. For those who made multiple mistakes or who missed key questions such as the facility ID, they were not recommended for hiring as this showed a critical lack of attention to detail. See the summary table below for the outcome of the two training sessions.

Table 1. Summary of Hiring Recommendations for OSSAP

Training Group	Recommended	Not Recommended
South Zones	209	43
North Zones	206	71
Total	415 (78%)	114 (22%)

And so rather than having a pool of 529 candidates of unknown competency, as would have been the case in previous trainings, this testing process allowed us to eliminate 22% of the least competent participants from the hiring pool. In a stroke of good fortune, the total number of recommended enumerators was very near to our target of 400 competent enumerators.

Discussion:

While the insights explored in this paper may appear obvious, the cumulative effects of the resulting adaptations are expected to have a dramatic impact on future OSSAP data collection efforts. In a sense, these insights can serve as a basic minimum standard for major large-scale data collection efforts wherever they may be.

The three lessons learned that stand out most clearly are:

1. Pilot surveys and back-checking can effectively identify problems before full-scale launch;
2. “*Trained*” enumerators are not necessarily “*competent*” enumerators; and
3. Testing provides an objective way to verify enumerator competency.

This was the first time that OSSAP conducted back-checking of a survey effort and yet the returns on the investment were immediately clear. Identification of major data quality concerns led to a re-evaluation of OSSAP’s previous training approach and highlighted the fact that enumerators who had been trained were still making major mistakes. OSSAP is now convinced that back-checking is a cost-effective and essential quality control measure. As evidence, OSSAP recently hired and trained 15 back-checkers for the actual survey exercise. This is three times the number of back-checkers that were used during pilot.

As for the idea of including testing and evaluation at the end of training, this is obviously not a new idea, but it is one that can easily be dismissed as impractical or time-consuming, particularly for very large groups of participants (100+). After a full day of training it would be incredibly taxing to collect, score and tabulate a few hundred paper-based exams. But by using smartphone-based surveys, results are immediately available in an electronic format (.xls), thereby keeping the time required for analysis to a minimum. In this case, the scoring and evaluation took 2-3 hours of one person’s time and so proved to be a relatively simple and time-effective way to ensure at least a minimum level of competency for even large groups of enumerators.