

CLASSROOM OBSERVATION TOOLS

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PREFACE

This document uses the experience of the IEQ project, which was carried out from 1991 to 1997, to examine a number of issues related to conducting systematic observations in schools and classrooms. IEQ during that period worked with five developing countries: Ghana, Guatemala, Mali, South Africa, and Uganda. A subsequent project, IEQII, has worked on additional issues of educational quality in Ghana, Guatemala, and Uganda. The countries of El Salvador, Haiti, Honduras, Guinea, Jamaica, Malawi, and Zambia have also been added as IEQ partners. Information on the instruments used by IEQII countries can be found at www.ieq.org.

I. INTRODUCTION

Marta, a dark-haired girl with large brown eyes, is seated in a small-group Spanish language class with the teacher and three classmates. The teacher dictates a phrase to the students. After Marta hears the phrase, she quietly recites it to herself while writing it in her notebook. The teacher passes out pictorial scenes from the story she is dictating, which the students in this group paste in their notebooks. The teacher hands some of these scenes to Marta, who asks the teacher, “Do I put these here?” The teacher tells Marta that she can put them wherever she wants to. So, Marta puts them at the top of the page. Then the teacher continues dictating phrases, like “esos enanitos tan barbudos” (these little dwarfs with big beards). Marta writes this down but spells barbudos as “varvudos.” When the teacher sees this, she says to Marta, “barbudos con b de bananas, barbudos de barba” (bearded with b of banana, bearded from beard). Marta erases and writes “barbudos.” The teacher continues dictating, reciting “la pobre,” which Marta writes as “podre.” When the teacher sees this, she says to Marta, “muchachita con la b de bananas, pobre.” Marta erases and writes “pobre.”

This observation is taken from the field notes of an Improving Educational Quality (IEQ) researcher in Guatemala, where the focus is on individual children. It illustrates how classroom observations can capture the naturally occurring events of an educational intervention. In this case, the observation shows key aspects that developers of the active learning innovation for rural multigrade schools in that country hoped would take place. There is active and immediate involvement of the teacher with the students as they use a variety of materials in a comprehension and spelling exercise. Because of the informal and decentralized structure of the small group, Marta is able to interact directly with the teacher and receive feedback. The teacher encourages the children to do what they want with the visual materials, rather than prescribing where they should be placed. The small group allows her to catch Marta’s spelling difficulties, pointing out two misspelled words. On both of the teacher’s interventions, she refers to words the child already knows, thus building on her previous experience.

Information on what happens in classrooms can be captured through running logs, such as the example above, or through a variety of other observation techniques. This document presents examples of observational strategies and instruments that have been used successfully to examine issues such as patterns of classroom interaction, use of the mother tongue and a second language, and use of instructional materials in primary schools participating in the IEQ project. The information is not intended as a “how to” manual for conducting classroom-based research. Instruments for individual research will depend on the questions to be answered and the context in which the research is conducted. Rather, our aim is to provide examples and suggestions of things to consider from the experience of IEQ research-

ers in Latin America and Africa that may prove helpful to researchers or practitioners designing research that is focused on the classroom.

When designing research in all of the IEQ countries, the research teams reviewed several publications that described observational instruments. Generally, however, the reason to use one instrument rather than another or the contexts in which instruments were appropriate were not discussed in these publications. In this document, we will:

- orient the user to different kinds of instruments,
- provide information on the contexts in which they were used, and
- describe some of the processes and factors that guided decisions on development and use.

A. CLASSROOM OBSERVATIONS AND EDUCATIONAL QUALITY

The agreement reached at the 1990 World Conference on Education for All, held in Jomtien, Thailand, has led to an international interest in greater use of multi-method research designs that include classroom observations for implementing educational reform. While an international consensus was reached that educational quality can be improved and that all children can learn, little practical guidance on what types of educational reforms work best for which child was provided by the Jomtien conference. Two reasons are given for the lack of information on educational reform in developing countries. First, international research on educational development has focused largely on issues of access at the system level. Attention has gone to studying ways to organize, plan, and govern education systems, to calculate system-wide statistics such as enrollments, and to deliver basic educational inputs. Thus, the quality of the students' experience has largely been ignored. Second, when schools and students have been the focus, the questions asked have been too global. Studies have used student performance measures to ask whether a program or reform worked, rather than asking what aspects of the program work best for which types of students. In addition, the use of tests alone is seen as insufficient to understand how programs in different stages of implementation affect children and might be improved. These questions imply that, if educational quality is to be improved, studies of individual classrooms and students must be incorporated into research designs and feedback provided to teachers and administrators as part of an ongoing process.

The IEQ project attempts to respond to these needs by gathering and using information about instructional practice and pupil performance at the school and classroom level in order to improve teaching and learning. IEQI worked collaboratively with host country educators and researchers in Ghana, Guatemala, Mali, South Africa, and Uganda to gather information that reports progress in implementing educational reforms in those countries. We use a variety of methods to learn about the quality of the classroom experience: measures of academic performance; interviews with pupils, teachers, parents, and community members; and direct observation of classroom behaviors and interactions. The focus is on

use of the information through workshops, conferences, advisory board meetings, and discussions with reform implementers to improve teaching and learning. The findings generated by classroom observations provide a common basis for dialogue among practitioners and policy makers, as they reflect the reality that teachers and students are living in the school.

In Ghana, IEQ worked with a project, funded by USAID, to develop textbooks. The government and USAID were pleased because local textbooks had been developed, printed, and delivered to schools. But when IEQ researchers visited and observed the classrooms, the textbooks were not in the hands of the pupils. Although the textbooks had arrived in the schools, frequently they were not being used. Sometimes the teachers were copying on the board from the textbooks or, in other cases, only a few textbooks were in use as teachers were afraid children would get them dirty. Through observation and other complementary data collection, the researchers provided policy makers and local educators with the information that led them to monitor and encourage textbook use.

This example from Ghana illustrates how observational data were used in that country to further the dialogue about educational quality in ways that led to policy change. In addition to describing the reality of a school or classroom, observational data can be used in several other ways. When gathered in conjunction with performance testing, classroom observations can add to the interpretive power of the statistical analysis. Observational data of individual children can guide the statistical analysis by suggesting relationships to be examined or can be incorporated into the statistical analysis to explain behaviors related to achievement gains.

Observational data can also explain why expected outcomes did not occur and assist in changing the program to improve implementation. The following example from Guatemala illustrates this point.

Research in Guatemala focused on implementing an active learning model for multi-grade schools that used small-group work and self-instruction guides. During the first year of research, the first- and second-grade children in the program generally had higher reading scores than children in traditional schools, and reading achievement was correlated with participation in small groups with the teacher present. Observational data showed that teachers spent more time with younger children and directed them in enjoyable activities to encourage word recognition and vocabulary expression.

In the second year, when the children advanced in grade, they performed no better than children in traditional schools. Observational data explain these results by showing that teachers still spent the bulk of their time with first-graders, while the second- and third-graders being observed were supposed to work with their self-instructional guides. In most cases, however, they had not yet developed sufficient reading comprehension to understand the directions in the guides and, thus, resorted to simply copying the text. As an outcome of this finding, IEQ worked with the teachers to develop simple instruments, based on the guides, for assessing children's comprehension.

An additional use of observational data is to measure the nature and extent of program implementation. In measuring implementation, researchers intend to show not only what programmatic aspects worked best for which types of students, but also the feasibility of successfully implementing the program in different geographical and socio-cultural regions. Observational data can also show change over time within the context of daily activities. As test administration often removes children from the environment in which skills are learned as practiced, focused observations of individual children at specific times during the year can provide a complementary and equally valid means of measuring student performance.

B. USING THIS DOCUMENT

The focus of this document is on instruments and strategies for collecting observational classroom information. Thus, the main section is devoted to different kinds of instruments and the types of research questions that they can best be used to answer. Illustrations from the observational instruments are employed to explain certain procedures, and complete sets of IEQ observational instruments are provided in Appendix A. Brief discussions of the role of the observer, quality control, and reduction and analysis of observational data are also included.

We have called this document a tool, as we feel it can best be used in preparing for fieldwork in schools and classrooms. The examples of instruments, researcher roles, and the like can be used to generate ideas for designing a research strategy, appropriate instruments for a given research problem at the

classroom level, and field procedures including quality-control measures. It may also be used in training workshops in which the field researchers participate in developing instruments.

II. OBSERVATIONAL RESEARCH

Note that the focus here is on systematic classroom observation to contribute to the understanding of educational reforms taking place in the IEQ countries. Thus, the researcher plays a very different role from that of inspectors who make “surprise” or observation visits to determine if a school is functioning properly (e.g., teachers present, lesson plans completed) and they play a different role than members of national or international observation teams, who make relatively quick tours to familiarize themselves with the general school context.

The role of the researcher who collects information through questionnaires, interviews, or achievement tests is also different within a school than that of the researcher who collects observational data. In those situations, the researcher plays the role of an “outsider” concerned with many classrooms and schools, of which an individual school or classroom is a small part. Information is collected in the same way from all respondents in a situation that is not part of the normal daily life of the school, and anonymity of respondents is ensured. The assumption is that since the researcher is external to the school, stays only a short time, and takes the information away when finished, that the information will be seen as having little direct bearing on individual school or classroom life. Thus, respondents will answer honestly, as the results are not perceived as affecting them personally.

Observational researchers spend a relatively long time at a school, as they are trying to obtain a fair sample of typical life within a school. Since they are part of the school and classroom environment while in the school, they have a role that is part “insider” and part “outsider.” Their focus is the individual school or classroom. It is assumed that the researcher will win the trust of the school staff, or at least spend sufficient time at the school so that the novelty of his/her presence has worn off, ensuring that typical life within the school will be accurately recorded. Thus, school personnel will act normally and respond honestly, so that their “story will be told.”

Researchers who conduct observations may also engage the teacher as a collaborator in the research, where observations are shared and the reasons for certain behaviors or activities observed are discussed. This type of role was played by IEQ/Ghana researchers in helping to implement pedagogical strategies. It was complemented by a second researcher who conducted observations using the types of instruments discussed in this document, where the researcher played a more neutral observer role. The neutral observer role is the strategy that predominated in the IEQ research and will be the focus of the later discussion of role management.

A. ROLE OF THE OBSERVER

Remember that teachers, parents, and, possibly, children themselves will have questions and preconceptions about the observer's role. Researchers will be "on the spot"; hence their role management is critical, particularly during the initial contact with the school.

The following are several role management strategies that have proved effective for IEQ researchers:

- **Have a clear picture ahead of time of how you are going to explain your role as a field researcher.** This should be discussed, agreed upon, and piloted while preparing for data collection. In describing one's background, academic achievements should be de-emphasized (unless asked). Researchers should focus on previous experience with schools and their interest in the education of young children. Emphasis should be placed on having been trained in observing children in classrooms and that recording their behavior is the principal concern.
- **Recognize the role of school staff and students as experts in what happens at the school.** Since much of the success of the research depends on the quality of information provided by school personnel, researchers should emphasize what the school personnel considers important about the educational reform and the school. This will help alleviate potential qualms the staff may experience about being observed, and it will also enhance the collection of more subtle (less easily observable) information and feelings that may be critical to the educational reform with which they are working.
- **Be careful not to be insensitive, rude, inconsiderate, or unhelpful.** Teachers are always busy and preoccupied during the school day. It is best, during the first contact, to ask general questions and to make positive comments, whenever possible, about the school. Use the opportunity to monitor personal impressions of the site and the people one meets. Do not get involved in extensive data collection immediately upon arrival.
- **Become part of the scenery by "hanging around" and interacting with the teachers, aides, and parents during their free time.** Do not impose on them when they are working with the children. Often a researcher can talk to them while they are preparing materials, offering to assist them.
- **Do not play the role of evaluator, as this has a negative connotation in many schools.** Researchers should make it clear that they are not at the school to evaluate the performance of the teachers or to report their behavior to the administrators. A good

strategy is to point out that one is observing the children and their responses to the program.

- **Model the role of an observer.** As researchers respect the roles of teachers and students, the latter should in turn respect that the researcher's work is to observe; this can be demonstrated by the researcher not serving as teacher's helper, tutor, or other function during actual observations.
- **Keep a diary to record personal feelings and impressions.** This helps to note changes in the field researcher role, particularly rapport: interpersonal relations between school staff, program developers, and the researcher in the role of observer.

No matter how careful a researcher is in role management, ethical questions are likely to arise during data collection. Thus, fieldworkers should use discretion in expressing personal opinions or taking sides in disputes in the field. This is important because an expression of disapproval may lead people to alter their behavior or hide it, which means that the researcher may not be able to observe the behavior that he or she wishes to study. Rather than express an opinion or verbally interpret an action, it is best to stand back and let the action take place.

A general rule of thumb is not to intervene if unethical or illegal practices are observed at the school, unless a person is in immediate danger. Often, the best strategy is to collect the facts related to an incident, then consult with the research coordinator. This individual will put the matter before the project directorate, which will then make a decision regarding the episode and contact the proper authorities where warranted.

Avoid giving any presentations related to the project or the work during the course of the research. Even a seemingly innocent presentation such as a description of the project may have unexpected repercussions. A researcher may be quoted out of context or be perceived in a way other than intended.

At the school level, when asked about the research, the researcher can give general responses or focus on the positive aspects of the program. If one is pushed to give information that might improve performance, make sure to document how much and what information is given and how such information alters classroom practices or the researcher's role.

If one observes behavior for which an individual in the classroom may later feel embarrassed or ashamed, it should not be recorded. Look away or engage in some other activity, then make sure to say something reassuring to the person in question at the first opportunity. Likewise, do not refuse requests

to look at the research instruments. In general, researchers should not carry more than one day's notes with them and should use codes when noting behaviors judged sensitive.

Researchers should always tell people the truth (e.g., the project is USAID-funded and the confidentiality of all individuals must be protected; therefore no names will be used in any reports of the research results).

B. OBSERVATION STRATEGIES

There are a number of strategies that an observer can use in carrying out classroom observations. The strategy chosen will depend in part on the role adopted by the observer and the kind of data to be collected to answer the research questions. If, for example, one is interested in a classroom-level situation, such as the number of small groups or dyads being formed by children, an "observation point" strategy may be used. In this strategy, the researcher will find a point from which the whole classroom is visible, then visually sweep the classroom at timed intervals and count the number of small groups. The observer has very little contact with teachers and students while observing and generally is not situated within the main action in the classroom.

A second strategy, similar to the one above is the "piece of the furniture" strategy in which the observer sits at a student desk and becomes part of the desk. That is, he or she does not play a part in the activities going on, even when addressed or asked questions by students. This strategy is often used when the focus is teachers' interactions with students, as it reduces teacher attention to having an observer in the class. As with the first strategy, it can be used for collecting information at specific intervals over the course of the school day.

A third strategy is that of "teacher's helper" where the observer moves around the classroom much like a teacher or teacher's assistant and responds to student questions or requests. This strategy is often used when observing individual children, as it allows the observer to follow individual children as they move around the classroom or school without attracting undue attention.

A final strategy is to play the role of a student and actually participate in the classroom activities as if a member of the class. This strategy permits in-depth collection of information on *why* children behave in certain ways in the classroom, as opposed to the other strategies that are most appropriate for determining *what* teachers and children are doing and *how* such behaviors relate to student performance. The difficulty with this strategy is in recording the information, as it cannot be accomplished while the observer is interacting with the children. Researchers make mental notes and use mnemonic devices such as jotting down key words to retain an observation or an event in their mind. Extensive write-ups of the experience are then completed after the observation.

C. INSTRUMENT DEVELOPMENT AND TRAINING

The type of instruments developed in any research project will depend heavily on the research questions. As the IEQ project focuses on research use, an initial step in developing the instruments is always to meet with program developers or implementers in each country to determine what information would be useful. Once programmatic domains or aspects relevant to successful implementation have been determined, the general steps are to:

- 1) operationalize program goals and objectives,
- 2) develop or adapt instruments to measure these aspects,
- 3) pilot-test the instruments and the researchers' ability to use them, and
- 4) make adaptations to ensure consistent use.

In carrying out these steps, however, a number of issues must be considered. These include: the types of instruments already available; time and number of personnel available for data collection; experience of the researchers (both in previous observational data collection and familiarity with programmatic aspects to be studied); time available for data reduction and analysis; and the like. It is possible, for example, to design a checklist that would require researchers to identify the presence or absence of textbooks in the classroom and checklists to identify the presence or absence of children's cognitive strategies in language learning. The first activity might require only familiarizing the researchers with the texts and a short visit to classrooms to note if the texts are available. The second activity, on the other hand, requires that the researchers have the experience to consistently identify behavioral indicators of specified cognitive strategies, to develop similar sampling strategies for observing individual children, and to spend an extended time in the classroom observing the children.

While observational instruments are a valuable tool, remember that the most important instrument in observational research is the researcher. Thus, training that includes the researchers' participation in constructing instruments and pilot testing is critical to successful data collection. This type of training allows the research team to develop common procedures and definitions based on practical experience with the school environment. Ideally, sufficient pilot testing and refinement of instruments will take place during training and the final instruments and procedures will be a product of the training experience.

IEQ experience suggests that to develop observers' skills, learning should be heavily experiential. The training method should emphasize that all researchers experience the situations that they are likely to encounter during data collection. This is accomplished by focusing the training on a series of simulations of the actual fieldwork required of the researchers. On the first day, trainees should be in the field practicing observations, introducing themselves, and presenting their role. These types of exercises are aimed at providing experiences similar to those that the researchers will likely encounter in the study classrooms and communities.

In Guatemala, for example, on the first morning of training, after an initial introduction to the study, individual trainees were sent to observe a social situation where they have never been before (e.g., market, bank, hotel lobby, coffee shop, bus stop). Trainees found a place and tried to learn all they could about it for 10 minutes. They had to engage in at least one verbal interaction during the 10 minutes, then returned and wrote up their findings. This exercise allowed discussion among trainers and trainees of the strategies employed for entry into the research environment, role management, decisions on sampling, note-taking styles, level of inference, and the like. Other simulations generally used by IEQ in training classroom observers include: using observational instruments with video tapes of classroom interactions; having some trainers and trainees role-play being an elementary school classroom while others observe with the instruments; and observing a local school classroom close to the training site to conduct observations.

The members of the research team often have a variety of professional responsibilities that limit the duration of training. Thus, training researchers to carry out classroom observations can last a maximum of one week at a time. Given the time constraints, the training focused on developing a limited number of skills needed for collecting the data, which took place immediately after the training. The goals of training of this type may include: ability to use open-ended interviews and observational forms and checklists; development of strategies for capturing information and systematically expanding field observations and interview data; role management and fieldwork skills related to interpersonal interaction styles; explanations of the project and the roles of the researchers to others; and an understanding of the professional and IEQ rules concerning confidentiality, staff policies, and ethics.

Exhibit 1 shows the schedule of one week's training conducted in Guatemala. The training was intended to prepare the fieldworkers to perform their initial key tasks: establishing themselves in the field, collecting interview and observational data, collecting fieldnotes on focused topics, and understanding procedures for data reduction.

After introduction to the study, the first day of training focused on reviewing qualitative methods to ensure a common conceptual framework. The afternoon built on the researchers' knowledge and experience to make sampling decisions and, at the end of the day, to review the prototype instruments. The focus of the second day was role management, issues of fieldwork strategy, and actual practice in filling out the observation forms while observing a videotape. Interviewing techniques were discussed and practiced on the third day.

The fourth day of training was blocked out for simulation. The researchers went into practice school sites and did a full day's work as if they were actually at sample sites. Data collection took up most of the morning at the schools and the afternoon was devoted to writing and organizing the information. The data-collection materials were then submitted to the training staff for review with each researcher

Exhibit 1: Training Schedule

Day	Morning	Afternoon
1	<p>Introduction to IEQ study</p> <p>Value of qualitative research in education</p> <p>Strategic themes in qualitative methods</p> <p>Field exercise</p>	<p>Sampling (site selection and paired sites; selection of teachers/classrooms, students, community members)</p> <p>Introduction to prototype instruments</p>
2	<p>Field work strategies:</p> <ul style="list-style-type: none"> • Managing role of researcher/observer • Use of observation forms • Length of observations • Sources of data 	<p>Video of classroom interaction with exercises with forms and discussion</p> <p>Scheduling of observations</p>
3	<p>Interviews:</p> <ul style="list-style-type: none"> • Format • Questions/probes • Note-taking • Neutrality and harmony • Quality control <p>Scheduling of interviews</p>	<p>Video on interview styles and discussion</p> <p>Role-play practice with interview guides</p>
4	<p>Fieldwork practice in schools and communities.</p>	<p>Discussion of fieldwork experience</p> <p>Review of data collected</p> <p>Checks of reliability</p> <p>Revision of instrument/manual</p>
5	<p>Write up of fieldwork practice results</p> <p>Introduction to use of displays</p>	<p>Quality control</p> <ul style="list-style-type: none"> • Triangulation • Data review and editing • Communication • Feedback <p>Ethics</p>

for feedback and fine-tuning of the fieldworkers' products (i.e., the checklists, other field notes, and interview data). The goals of the training were reemphasized by focusing on the data related to the research questions and revising the instruments or procedures that researchers found necessary as a result of their practice. The final day was devoted to initial data reduction, analysis and quality control. A session was also held to discuss policy and ethics.

III. INSTRUMENTS

Most observational instruments are forms that help a researcher to collect systematic observational information about research questions. Whatever the purpose of the form, it should contain certain basic information, including the name of the school and identification of the classroom and the teacher. In the case of observations of individual students, the students should also be identified by name or number. The context of the observation (e.g., language class, math class, recess) should also be recorded on the form, as well as the time that the observation took place. Although the format of an observation form will depend primarily on the objectives of the investigation, it is always a good idea to leave space on the form to add codes or additional notes and comments. What follows is a discussion of some of the types of observational forms used in the IEQ project.

A. MAPS

Drawing maps of a school and especially of classrooms can provide a useful tool to a classroom observer. A *school map* sets the context of the study by showing where elements of the school (roads, classrooms, offices, storerooms, kitchens, recreation areas) are located and their relative size. It also shows what facilities (potable water, latrines, electricity) are available. Developing a school map can also be a good way for an observer to begin to understand the school, as the school director can give the researcher a tour of the school. Such a tour will identify the elements of the school that the school personnel think are important and provide the researcher with the terms that staff use to refer to these elements. Using this vocabulary helps to build rapport and mutual understanding with school staff. In longitudinal studies, initial maps serve as a baseline for measuring infrastructural change in the school.

Classroom maps show the spatial arrangement among students, teachers, and materials. They show the relationship of gender and other child characteristics such as age and ethnicity to the spatial organization of the classroom. Classroom maps are generally drawn during a researcher's first visit to a classroom. They include: the position of desks; instructional aids such as blackboards, posters, learning corners, and textbooks; and structural features of the room like doors, windows, and cupboards. In the IEQ project, researchers making classroom maps have generally sketched these aspects of the classroom, then identified the students by assigning a number to each with an "F" or "M" subscript to show the student's gender. Student age and ethnicity are determined by reviewing the map with the teacher during a break in classroom work.

The researcher then uses the map as a reference in observations. For example, in an observation of teacher-initiated interactions with students, the observer writes down the number of each student with whom the teacher interacts in a given period of time. These interactions can be examined for patterns of interaction by students' gender, ethnicity, or age. The following examples are maps from a traditional multigrade school and a New Unitary School (Nueva Escuela Unitaria), which form part of the IEQ

research in Guatemala. As the maps show, the traditional school is organized with the teacher as the center for learning. All children's desks face the front, where the teacher's desks and the blackboards are located. The researcher has labeled each grade and also darkened the desks of those children who will be the subjects of individual observations and labeled those who are repeating a grade with an "R". In the New Unitary School, which emphasizes the use of self-instructional guides and collaboration among students, a different use of space emphasizing small groups is apparent. Learning corners and the library are also identified.

In data analysis, the information in maps can be used to form classificatory variables such as "well-equipped" schools and "poorly-equipped" schools or "interactive" and "traditional" classrooms. Such variables can be used to compare programs in terms of absolute or relative frequencies or in conjunction with other variables (e.g., to measure the relationship between "interactive" classrooms and the use of materials). Maps can also be analyzed to identify different spatial patterns, such as the location of girls in the classroom. Again, such patterns can be related to other information, such as the frequency of teachers' interactions with children of different genders. In using such data, however, care must be taken to ensure that seating patterns are stable.

Exhibit 2: Classroom Map - Traditional School

School: _____

Date: _____ Observer: _____

INSTRUCTIONS: On this page draw a map of the classroom, locating first and second grade. Locate: posters, blackboards, schedules, etc., and draw the position of each desk. Mark the location of each student by assigning each a number and indicating the child's gender: (F) for feminine and (M) for masculine.

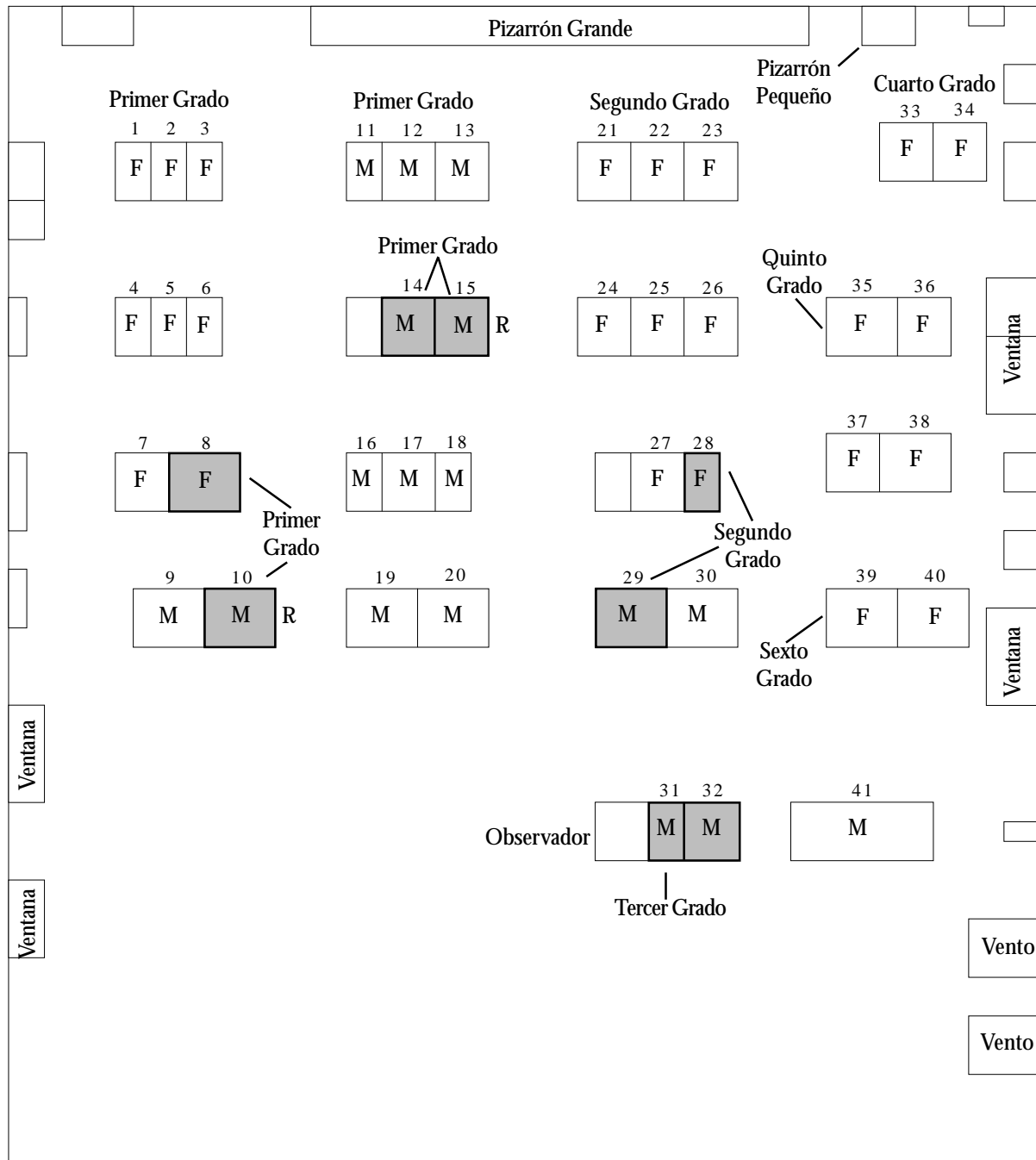
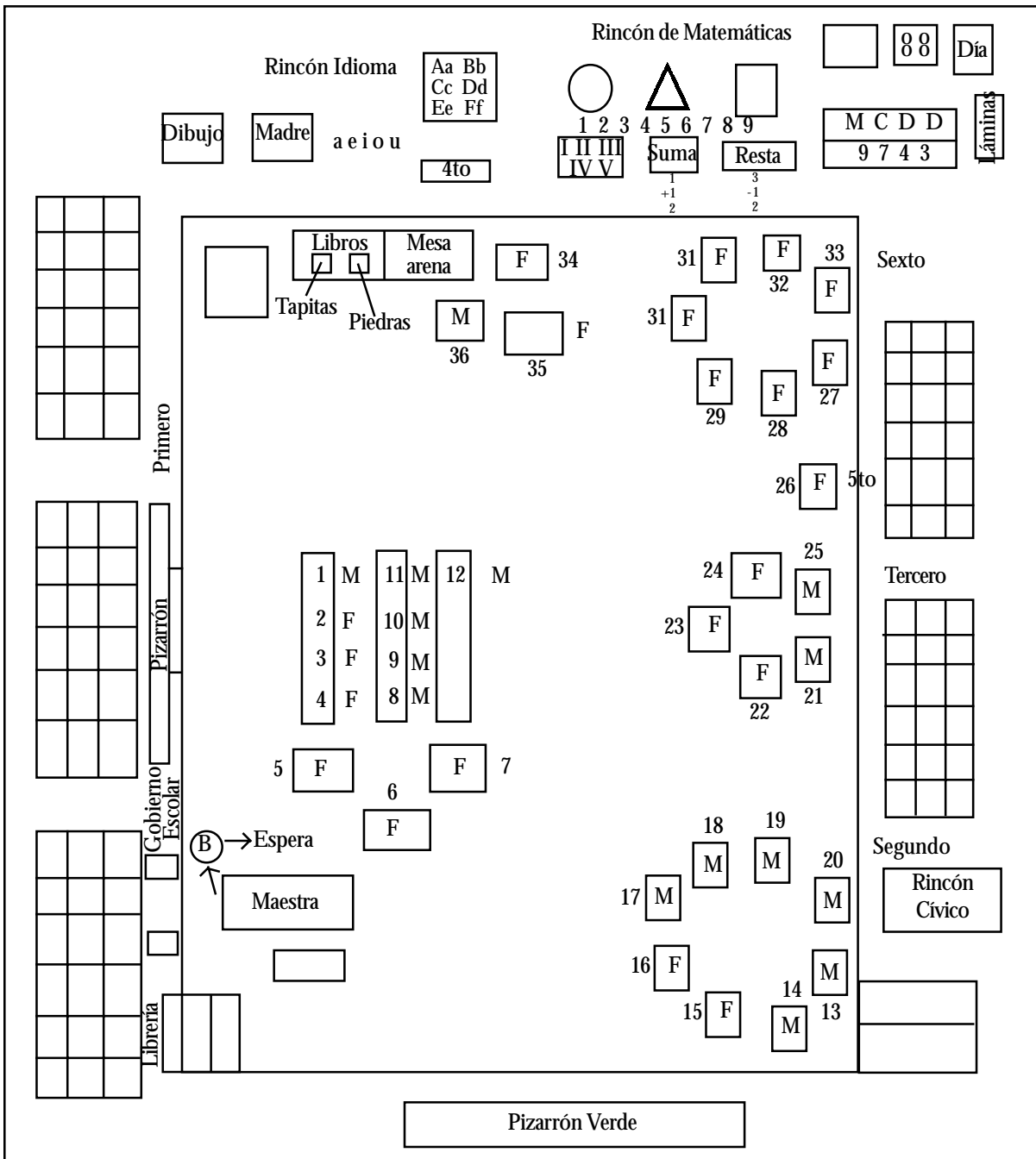


Exhibit 3: Classroom Map - Active Learning School

School: _____
 Date: _____ Observer: _____

INSTRUCTIONS: On this page draw a map of the classroom, locating first and second grade. Locate: posters, blackboards, schedules, etc., and draw the position of each desk. Mark the location of each student by assigning each a number and indicating the child's gender: (F) for feminine and (M) for masculine.



B. INVENTORIES

Inventories are counts of certain types of objects or conditions present in a classroom or school. Generally inventories are concerned with whether instructional materials of a certain type are available in a classroom. The number of materials, such as textbooks, present in a classroom can also be investigated through an inventory. In Ghana, for example, early IEQ research focused on new textbooks developed by the Ministry of Education. Thus, an important question was whether textbooks had actually been distributed to the classroom and in what quantities.

Inventories may also be concerned with physical conditions or the numbers of children or teachers in a school or classroom. Inventories are used to answer questions about availability of supplies or facilities, such as the availability of latrines or bathrooms, the ratio of books to children, or the ratio of pencils to children.

The EDUCARE Observation Protocol developed as part of IEQ efforts to study preschool child development programs in South Africa has elements of an inventory. As can be seen from the following example of the first section of the observation protocol, researchers used an inventory to identify the existence of certain conditions or elements normally associated with effective preschool programs.

THE CENTRE:

Please make a tick in front of each thing the centre has:

- A clean classroom
- A schedule/plan for the activities that the children do during the day
- Child-sized tables and chairs
- A place for children to lie down
- Clean bedding for them to use to lie down
- A safe place to play outdoors
- A clean bathroom
- Colorful decorations on the walls
- Books for the children: About how many books are there?
- How many books are there?
- Toys/games for the children: please list some of the toys/games
- Educational materials
- Learning areas

This inventory includes both noting the presence and absence of certain things and counting the number of items, as in the case of books. It also requires the observer to make some judgments, as it asks about the quality of elements such as the classroom, bathroom, bedding (“clean”), and a place to play outdoors (“safe”). To achieve consistency among researchers in making these judgments, operational definitions are developed and agreed upon during training.

For example, clean bedding operationally will be bedding that is not stained or torn. These are observable criteria that all researchers can agree upon and practice identifying during training.

C. CHECKLISTS

Presence and Absence. The most commonly used type of instrument for classroom observation is the checklist. There are different types of checklists, which are often used together. The simplest type is used for measuring the presence or absence of an event or action. The focus on aspects of a classroom that must “happen,” and are therefore not always present, is what distinguishes this type of checklist from an inventory. As mentioned, inventories focus on inanimate aspects that are continually part of the classroom environment.

Checklists that focus on the presence or absence of certain events or actions are used to provide a profile of what happens in classrooms. The types of questions for which this form of checklist can be used include: Do small groups occur? Do teachers use praise? Are girls called on? The following examples show how similar checklists were used by IEQ teams to gather different information in South Africa and Uganda. Again, it should be emphasized that the examples presented here are only small segments of the overall observational instruments. The complete instruments are found in Appendix A.

In South Africa, where the study focused on the child development programs for preschool children, one of the research interests was to determine if the programs offered a nurturing environment. At the classroom level, this was operationalized in terms of discipline and praise, as shown below.

- How does the teacher discipline the children (tick all that apply)?

- 1. No discipline observed
- 2. Yells at the child
- 3. Hits the child
- 4. Punishes the child
- 5. Quietly reminds the misbehaving child of the rules
- 6. Separates the misbehaving child from other children
- 7. Other (specify)_____

- How does the teacher praise the children (tick all that apply)?

- 1. No praise observed
- 2. Compliments the child
- 3. Hugs/touches the child
- 4. Gives the child a reward (more food, sweets, etc.)
- 5. Other (specify)_____

In Uganda, a research priority was to examine teaching methods being promoted through that country's efforts to reform education. Thus, the presence or absence of a variety of teaching methods was investigated through an observational checklist. As can be seen from the following example, the format of the checklist item is similar to that used in South Africa.

- Check the instructional methods the teacher uses (at least 10 mins. of lesson)

- Lecture
- Having pupils work in groups
- Writing notes/drawing diagrams
- Marking books/papers at her/his desk
- Marking books/papers at pupils' desks
- Demonstrating experiments
- Working with individual pupils
- Answering pupil questions
- Group recitation
- Question and answer
- Other, please list: _____

The teacher is often the focus in a "present/absent" observational checklist. There is one teacher as opposed to several children, which simplifies sampling strategies. Also, it has generally been assumed that the teacher manages and structures the actions that occur in the classroom and should be the focus of data collection aimed at characterizing the classroom. Children, however, can be the focus of checklists of this type, as shown by the following item from the Uganda observation instrument.

- What are the pupils doing? Please tick pupil activities which include:
 - ___ Writing
 - ___ Drawing
 - ___ Doing math problems
 - ___ Giving choral answers
 - ___ Reading out loud
 - ___ Reading silently
 - ___ Asking questions of the teacher
 - ___ Answering teacher's questions
 - ___ Talking with other pupils
 - ___ Misbehaving
 - ___ Other, please list: _____

Again, operational definitions of what constitutes pupil activities as well as the length and context of the observation must be determined.

Observational Strategies. Several observational strategies can be used to collect present/absent data. One of the most common is a series of “spot checks” in which the researcher makes periodic visual sweeps of the classroom and checks any observed occurrences of the actions or events under study. Each sweep takes only a few minutes. When the interest is in characterizing the instructional day, such sweeps are repeated several times during each hour of instruction, so that a total of 8 to 10 data points are available for analysis. When the interest is in characterizing specific periods of instruction or lessons, as was the case in Uganda, a strategy of continuous observation during the instructional period can be used. In this case, the observation lasted the entire class period, up to 40 minutes, and focused on the behavior of children as a group.

Expanded Presence/Absence Checklists. A slightly more complex present/absent checklist was used in a second IEQ study of South African schools. This study examined classroom materials and employed a resources checklist. As seen in the example below, this differs from an inventory in that observers are asked not only to identify whether materials are present but whether they were used in a lesson. Thus, the important variable is not only presence of the materials but presence or absence of “use” of the materials. An intuitive, four-letter coding system in which a single letter represented different conditions of the resources during observation was used instead of the check marks employed in the previous examples. In addition, spaces were provided on the instrument for comments by the observer about “availability” or “use” of materials. Space for comments is useful, allowing observers to describe unanticipated situations and events that can then be factored into the data-analysis plan.

Classroom Resources (South Africa)

V=visible but not used

U=used in this lesson

N=not visible but available

A=not available

Please circle where relevant. Check with teacher if you are not sure.

1. prescribed textbooks
2. exercise books
3. wall charts
4. chalkboard, duster & chalk
5. power points
6. visual teaching aids
7. other reading materials
8. PSP kit
9. Molteno materials
10. READ Materials

Comments: _____

Frequency Counts. A second type of commonly used observation checklist is a frequency count. Frequency counts differ from observation of presence/absence in that the number of occurrences of an event or action under study are recorded, rather than simply noting if the event was ever observed or not.

Frequency counts are used where the object of the research is to compare individuals or schools in terms of certain types of behaviors. For example, questions such as “Are there differences in the predominant instructional methodology used in schools implementing an educational reform and schools not implementing the reform?” or “Are there differences in teachers’ interaction patterns with boys and girls?” can be answered through frequency counts. IEQ Uganda used frequency counts to examine this second issue. Researchers observed a lesson and focused on the teacher for a given amount of time, marking each response to a teacher’s question with the appropriate code. As mentioned previously, it is important that research team members agree on the operational definitions of behaviors such as “accepted,” “ignored,” “embarrassed,” and the like.

Totals from each observation period were then tallied in terms of the teacher behavior under study. The form also included a space for recording the total number of boys and girls in the classroom. Thus, in addition to examining total frequency of each type of behavior, researchers can examine the relationship

of each type of interaction with the relative percentage of boys and girls in a class. For instance, girls may be involved in only 45% of the total interactions with the teacher. However, if they make up only 40% of the total observed classroom population, they are actually engaged in relatively more interactions with the teacher than are boys.

The teacher is often the focus of frequency counts, as it has generally been assumed that the teacher orchestrates classroom interaction. With greater emphasis on child-centered approaches to learning, more attention is being paid to child-initiated interactions and the different experiences of individual children in the classroom. Thus, a sample of children that is representative of the class in general (e.g., two boys and two girls making normal progress, and one boy and one girl repeater) might be selected for observation.

Strategies are similar to those used for other types of observational checklists. A researcher uses a “snapshot” strategy of focusing on the target teacher or children for a period of five or ten minutes and checks any interaction with the proper symbol. Such snapshots would take place a number of times over the school day to characterize the instructional day at a school. Again, when the interest is in characterizing specific periods of instruction or lessons, a strategy of continuous observation of the teacher or several students during the period of the lesson can be used. As mentioned, the repeated observations ensure the stability of the observation and the characterization of what normally happens in the school, whereas a single “snapshot” may reflect an anomaly such as the teacher dealing with one student only or being called from the room. While such events are important, they should be recorded in the broader context of an instructional period or a school day.

D. RATINGS FORMS

Rating forms are used to summarize the relative occurrences of different events or actions in a classroom. They are filled in by an observer after a period of observation (e.g., school day, lesson). Rating forms are generally used to compare classes or schools where the behavior of an entire class of children or the general pattern of interactions of teachers are of interest. They build on the observer’s experience by allowing her/him to make judgments about what she/he has observed over a period of time.

The strategy with rating forms is for the researcher to observe over a designated period of time. Often during this period, the researcher will collect other types of observational data through inventories or checklists. This experience will then be employed to judge the overall nature of the classroom. IEQ/South Africa impact evaluations of primary schools used one of the most common formats for rating forms. As shown in the example of the instrument, Likert-type scales were developed for researchers to use in making judgments about what learners and teachers are doing during an observation period. The

numerical scale was grounded with an example of the criteria for making a judgment to ensure consistent judgments across observers.

Learners Involved in Active Learning Tasks

4 All learners manipulate materials. Others watch.	3 Most learners manipulate materials.	2 Some learners manipulate materials. Most watch.	1 Learners are not involved in active learning tasks.
---	--	--	--

Description: _____

Learner Independence

4 Learners find information independently. directed by working independently.	3 Learners make use of info. sources when instruction	2 Learners follow teacher's books.	1 Unquestioning transcribing of text from board and text teacher.
--	--	---------------------------------------	--

Description: _____

A second, similar type of rating form requires the observer to make judgments about fractions or percentages of individuals, time, events, or interactions that best characterize the classroom. The following example from instruments used to observe Uganda classrooms illustrates this type of format. Although the item is in a checklist format, it also has a vertical six-point scale, similar to the four-point scale used on the rating form in South Africa. As this item required a judgment about something where a numerical count was possible and would provide more useful information, it is not the most appropriate use of a rating form strategy.

- How many pupils are clean and dressed in clean clothes that are not torn?
 - ___ 5. All
 - ___ 4. More than 3/4
 - ___ 3. More than 1/2, but less than 3/4
 - ___ 2. More than 1/4, but less than 1/2
 - ___ 1. Less than 1/4
 - ___ 0. None

IEQ/Ghana also used rating forms to estimate the percentage of English used in different contexts. Researchers made judgments about the overall use of language by both teachers and students. After a period of observation, researchers filled in items on the classroom observation form such as the following.

Language Usage: What percentage (approximately) of what the children say is in English, in Ghanaian, or a mix of Ghanaian and English?

Children:	English	Ghanaian	Mix
A. During English class	_____	_____	_____
B. During change-over times	_____	_____	_____
C. During other subjects	_____	_____	_____
D. Outside of class at school	_____	_____	_____

Repeated “snapshot” observations can also be used for completing rating forms. One case where this strategy is appropriate is in determining what “most” children are doing in certain contexts. The South Africa Educare study examined what children were doing when engaged in learning activities in different preschool contexts. As can be seen in the example below, researchers are asked to judge what a “majority” and “minority” of children are doing in different contexts over a 5-minute observation period.

THE CHILDREN:

Classroom Engagement

Look at the entire class. Observe them for 5 minutes during a Large Group Activity, for 5 minutes during a Small Group (Free Choice) activity and for 5 minutes during Free Play. Tick off what the majority of children are doing when they are engaged in learning activities (A). Tick off what the minority of children are doing when they are disengaged (B). Write the number of children engaged in the activity and briefly describe that activity in the cell.

Behavior	Large Group	Small Group/ Free Choice	Free Play
GROUP A: Engaged			
Played with books			
Played with toys			
Ate			
Played with other children			
Spoke with/calls to teacher			
Cleaning up on their own			
Sings songs/chants			
Did art/writing/colouring			
Played number/letter games			
Other			
GROUP B: Disengaged			
Sat quietly doing nothing			
Played alone			
Isolation/timeout as punishment			
Fought with others			
Other			

Rating forms can also be open-ended. In this case, the observer is required to judge the degree to which something happened and then explain why such a judgment was made. As shown in the first example, researchers in Uganda made judgments about the degree to which teachers provided feedback to students during a lesson, then explained why the judgment was made. The item, however, allows for explanation of only a “Yes” judgment. More complete information might have been gained if researchers explained their reasons for choosing the category of “Somewhat.”

- Does the teacher tell pupils how well they are doing in their work during the lesson?
Yes ____ No ____ Somewhat ____
 - If yes, please describe how the teacher does that.

The second example taken from the South Africa Educare research asks researchers to make overall judgments about materials, the learning environment, and classroom interaction. Thus, although the questions appear similar to the presence/absence checklist, they differ in that they are not direct observations of presence or absence, but rather judgments of predominate characteristics of the classroom. The Yes/No format could have easily included “Somewhat,” as in the previous example, thereby creating a three-point rating scale.

- Did materials and equipment provide a wide range of experience? Yes ____ No ____ Why?
- Was the interaction between teacher and children appropriate? Yes ____ No ____ Why?

Care should be taken both in the use and analysis of rating forms. Where it is easy for researchers to count the frequency of some situation (for example, children with stained and torn clothing), the actual frequency is better information than the researchers’ judgment. Also, assigning numbers to a scale is a heuristic device to aid the researcher in making judgments. The numbers are not scores, but rather categories. They should therefore be analyzed as categorical data not as numerical data.

E. RUNNING LOGS

Running logs are narrative descriptions of ongoing events or actions in the classroom. They are most commonly used for intensive observations of individual children, but can also be used for observations of teachers or of lessons. Running logs are used to answer questions about the nature and quality of the experience of individual children in the naturally occurring events of the classroom and the relationship of this experience to school success.

Given the intensive nature of this observational approach, a sub sample of children, representative of particular types of students or of the class as a whole, are generally selected for study. Data collection often combines the strategies of time and event sampling, where specific events (e.g., language or math lessons) are randomly sampled and children are observed for specified amounts of time (e.g., 5 or 10 minutes). As with other types of classroom observations, children are generally observed over several days to ensure the stability of the observation. Often observations are conducted until the total observation period is equal to that of a normal lesson, for example, one hour. Where the interest is in examining change over time, the same procedures will be used at several different times in the school year.

Running logs were used as part of the IEQ classroom research in Guatemala. The research was concerned with implementing a curriculum reform that promoted collaborative learning among children in multigrade schools. Thus, the research was focused not only on program implementation, but also on the experience of individual children over the three years of implementation to date. A sample of twelve children (six first-graders and six second-graders, with equal representation of boys and girls) were chosen at random. These children were observed several times during each school year in academic lessons. A similar sample of children in schools not participating in the reform were observed in the same way as a comparison group. All children were observed over several days until a total of one hour of observations for each child had been collected at each observation period. Observers rewrote their rough narratives, and the data were coded along a number of dimensions of concern in the reform effort. Exhibit 4 is an example of a single observation in a running log that has been rewritten and coded of a child in the indigenous region of Guatemala.

The codes represent each interaction involving the child under observation. The first code (B) is the context; in this case, a small group without a teacher present. The second codes is the subject matter, Spanish. The third code is the initiator of the interaction; in this case, IO means initiated by the observed child and Pm means with a male peer. The fourth code is whether the interaction was verbal (v), as in this case, and what language was used (nl-native language). Subsequent codes show that there was a response in the native language (Rnl), which made the interaction a communication sequence (S); that the interaction involved reading vocabulary practice (readvoc); and that it also involved self-esteem in terms of turn-taking (esturn). The entire coding system is found in Appendix B.

The advantage of running logs is that they provide a rich body of data that can be examined as necessary during an investigation to interpret trends emerging from other data sources. They also provide actual examples of classroom interaction and behavior that can serve as a basis for discussions among practitioners and policy makers on how an educational reform affects children with different characteristics. The disadvantage is that such in-depth data collection is time consuming and labor intensive, requiring extended visits to schools.

Exhibit 4: Example of a Running Log

Date:	<u>03/14/94</u>	Observer:	<u>Hugo A. Cuc Quim</u>
Child:	<u>Eduardo Cañales</u>	School:	<u>Samilaha</u>
Grade:	<u>Third</u>	Subject:	<u>Spanish Language Arts</u>
Time:	<u>10:05-10:10</u>		
Description of Behavior			
		<p>Context: There are 40 students in the classroom, including students from preschool to fifth grade. All of them are working in the same room, grouped by grade and named with animal names to identify them with their classmates in the room. The observed child is in the "cows" group with three other male classmates. They are working with two dictionaries. The teacher is working with the "snakes" group. 10:05 a.m. Eduardo and a classmate are looking up the definition of "tomato." They begin to copy the definition of the word "tomato." Eduardo listens as Ricardo reads the definition and begins to write it down, "Tomato: a red, edible fruit..." (Tomate: una fruta comestible de color rojo). Eduardo finishes copying the definition and says to his classmate in Q'eqchi', "What's the next one?" (A hora qué toa, vos?). Ricardo answers, "Wheat, Eduardo" (Trigo, vos, Eduardo). Eduardo and his classmate begin searching for the word. They are heard saying "tra, tre, tri" as they spend a while looking for the word. After a minute, his classmate finds the word and says, "Here it is" (Aquí está, vos). Eduardo says, "Where? Oh, yes" (Dónde? Aaa, sí pues), and he underlines the word. Eduardo begins to read the definition out loud as he and Ricardo copy it. 10:10 a.m.</p>	
[B/S/IOPm/Vnl/ VRnl/S/readvoc/esturn]			
[B/S/Mat/IPm/Vnl/ VRnl/S/Readvoc]			

IV. QUALITY CONTROL

In observational studies-especially those that form part of multi-method multi-site research efforts, as was the case in all IEQ research-the questions of data quality are different than the tests of reliability and validity normally associated with psychometric measurement. Because of the flexibility in instrumentation and focus, the extended periods on site, and the descriptive data collected, the main issues in ensuring the quality of the qualitative data are the credibility of the information collected and dependability of the field researchers.

In the IEQ studies, the plausibility of information collected was assessed through the triangulation of different data sources such as multiple interviews, documents, fieldnotes, and classroom observations. As shown, different forms or formats, which included checklists, frequency counts, and ratings, were used in most studies to provide different levels of information used in concert.

Observer reactivity was controlled to some extent by assigning all fieldworkers a similar role-that of observer or facilitator (as opposed to evaluator)-as was the case in Guatemala and Ghana, respectively.

In addition, researchers monitored their role management and noted any role changes. Communication and feedback on observation at one site that should be investigated at others was also encouraged.

Since the studies included comparing different classrooms and schools, aggregating data from different sites, and collecting information on change over time, procedures to secure consistent data were followed. These procedures included: (1) initial training in observation techniques, including simulation of data collection using the instruments with videos and in local school classrooms; (2) additional training before each phase of fieldwork; (3) the use of standardized formats for data recording; (4) the development of a field manual to supplement training sessions by providing operational definitions of the activities under study, delineating role relationships, and specifying ethical and confidentiality considerations; and (5) the conducting of parallel observations either by pairs of researchers (Ghana) or by field supervisors with each observer (Guatemala).

V. DATA REDUCTION AND ANALYSIS

The study of educational quality requires research designs that not only show the effectiveness of an educational reform, but that also describe variation across schools and classrooms as well as among children of different characteristics within classrooms if the reform is to contribute to the success of all children in schools. To meet these multiple objectives, the teams in IEQ countries have developed research approaches that combine several techniques associated with ethnographic research, such as relatively extended stays at a site, unstructured interviewing, written narratives of observations, and in some cases, psychometric testing and surveying of parents. To examine trends and to compare programs, classrooms, and children, procedures for collecting qualitative data and for data reduction were standardized, resulting in what has been referred to as “formalized” qualitative research. Thus, the distinction often made between qualitative and quantitative research—that the former focuses on words while the latter focuses on numbers—has been blurred.

Counting. Many of the data-collection instruments used for classroom observation are readily amenable to computer analysis. Thus, much of the data from classroom observations in each country were analyzed through counting. Most of the instruments were designed to facilitate tabulation of information into absolute or relative frequencies. This was accomplished both through hand tabulations and by developing data-entry forms on a computer spreadsheet program such as Excel or Quattro Pro, which were then used for tabulation. Where observational data were integrated with data from other instruments, these files were then converted into SPSS system files for analysis. Data analysis included two types of statistics. One type was descriptive statistics (e.g., percent of silent and aloud reading in English lessons in Ghana, percent of time in small groups in Guatemala, percent of teachers’ responses with girls and boys in Uganda). The second type of statistics analyzed was inferential statistics, which combined

the observational data with data from other sources (e.g., regression examining the variance explained in student achievement by use of resources by teachers and condition of the classroom in Uganda, correlation of participation in small groups with academic achievement in Guatemala).

Coding. Coding was used in both data reduction and data retrieval. As discussed previously, codes that represent certain events or actions can be used as part of the observation instrument. Several IEQ countries used this strategy. Ghana, however, developed the most elaborate observational coding to examine students' practice of oral and written language skills in the classroom. Researchers used a coding sheet (see Appendix B) to complete an observational checklist (also in Appendix B) over intervals of five minutes. The tallies made on the observation checklist were then tabulated as described above.

In Guatemala, the codes for the running log were similarly used in both data reduction and data retrieval. As in Ghana, codes for each child were entered into a computerized database, then summarized on a spreadsheet that was transformed into an SPSS file for analysis. A cross-referencing system, summarizing the codes for each child, was also set up. This allowed researchers to examine individual children who exhibited certain behaviors or characteristics (e.g., leading others in carrying out classroom assignments) which distinguished children participating in the reform effort from those in the comparison group. In Guatemala, consistency of coding was controlled by developing operational definitions for all codes (see Appendix B), having the two regional research supervisors code all classroom observations and conferring when questions arose, and periodic dual-coding of segments of observations by a supervisor and the research coordinator.

Displays. Displays are charts or tables that bring together narrative or numerical information from a number of cases, such as classrooms or individuals. They can be ordered conceptually around key variables of interest to policymakers or in terms of content, constructs, or time sequence, depending on the objective of the study. A primary aim of displays is to examine multiple cases to determine trends and identify exceptions. The examination of processes and outcomes across many cases helps to understand how they are qualified by local conditions and, thus, to develop more powerful explanations for consistent trends. Most of the displays used by IEQ have been numerical rather than narrative. The principle followed has been to begin with the individual case and then to aggregate based on the trends found across cases. Given IEQ's focus on educational quality, it is just as important to study the cases that do not fit the trend as those that do. That is, an understanding of what contributes to a lack of quality is as important as understanding what does contribute to quality.

VI. SUMMARY

In this document, we have described some of the observational approaches used by host country research teams in conducting research at the classroom level during the IEQ project. We have pointed

out what types of instruments are appropriate to answer different research questions, as well as the advantages and disadvantages of each. Exhibit 5 summarizes the characteristics of the observation instruments presented here.

As is clear from the table, no single observation instrument will be appropriate for answering all research questions. Rather, observational instruments will be best used in combination, in order to show patterns and differences between individuals and groups. Observational information can be used in combination with background characteristics of children and teachers to determine relationships between observed behaviors and previous experiences. Other types of instruments must be used, however, to investigate the attitudes and values that lead to certain behaviors-again, suggesting the importance of multi-method research designs.

We have also pointed out that choices about appropriate instruments depend on more than simply choosing the “best” instrument to respond to the research questions. The effectiveness of the instrument will depend a great deal on the time available to use it correctly. Developing the most appropriate data-collection strategy to answer a given set of research questions requires consideration of at least three issues: the experience and training of the research team to use the instrument effectively; the ability of researchers to gain access to and be accepted in a school; and the skills required to organize, reduce, analyze and interpret the data found in the instruments.

Exhibit 5: Types of Observation Instruments

Instruments	Data Level	Purpose	Observation Strategy	Advantages	Disadvantages
Maps					
• School	School	Describe infrastructure	Tour with Director	Simple, allows comparison of physical conditions	No information on classroom variation
• Classroom	Classroom, groups of students	Describe spatial arrangements	Observation point	Tool for analysis of interaction and comparison of groupings	May underestimate spatially dynamic classroom
Inventory	Classroom - objects, conditions	Determine availability, condition of supplies	Classroom tour	Relatively easy to use and analyze	Limited information about usage. Researcher judgment
Checklist					
• Presence-absence	Occurrence of event or action	General profile of what happens in classrooms	Spot checks, periodic visual sweeps	Relatively simple, quick	No information on frequency of quality of event or action
• Frequency counts	Frequency of occurrence of event or action	Comparisons of individuals or schools	Systematic timed snapshots	Statistically comparable information	Requires careful sampling procedures
Rating Forms	Classes or schools	Summarize relative occurrence of different events or actions	Judgment through integration of all data	Summary of overall behaviors	Requires consistent judgments by all researchers, extensive training
Running Logs	Individual teachers, students	Determine nature and quality of events, actions	Time and event sampling	Information on quality of interactions, corpus of data that can be reanalyzed	Time consuming, requires extensive coding, high level of training, quality control

Appendix A: Observation Instruments from IEQ Countries

IEQ/Ghana:

- 1) Pupil Observation Guidelines
- 2) Pupil and Classroom Observation Form

Pupil Observation Guidelines

1. Prior to leaving for the school, make sure you have the following items:
 - a watch or time piece
 - Pupil Observation and Classroom Observation forms
 - the list of pupils in the class who were tested with their ID #'s
 - the names of the pupils to be observed and the names of alternates
 - paper for the seating plan
2. When you arrive at the school, confirm with the teacher the times you will be observing. You will want to observe an English lesson and a lesson in some other subject areas (with the exception of Ghanaian languages.)
3. Draw a seating plan for the classroom and ask the teacher (or a pupil suggested by the teacher) to work with you to fill in the names of all pupils in the classroom. Use the list of pupils who were tested to identify those children with Pupil Performance data.
4. Locate the pupils you will be observing. You want them to be as “natural” as possible. If the teacher or pupils know who is being observed, they may behave differently.
5. If one of the pupils you are to observe is absent (the high performing girl and her alternate,) you will need to select another high performing girl from the list of children who were tested. Be sure to use the correct pupil ID numbers on the Pupil Observation forms. (The ID # should be the same as the one used on the Pupil Performance Summary sheet.)
6. Begin by doing the timed Pupil Observation. Enter the classroom before the lesson begins. Be sure you are certain of which children are to observe. Note the starting time and complete the time information at the top of the form. Observe for 50 minutes or until the children have left the classroom. If at the end of the lesson some children remain for extra help or to complete their work, not the Context change and continue recording until the 50 minutes is over. If the teacher changes to a different content area (from English to Life Skills,) note this on the form and continue to observe.
7. Be sure to refer to the definitions for each of the coding categories. A category is checked if at any time during the 5 minutes the observed child meets the definition of the category. Thus, if at any time during the 5 minutes the observed child opens the textbook and turns to a story or Unit, the

child would get a check for “Child has textbook” and “Child uses textbook.” If at the same time, the teacher is writing letters or words on the chalkboard, all 4 observed children would get checks for “Print on chalkboard” and “New Print on chalkboard.” Not that for each 5 minute period you will need to consider all of the categories for all 4 children being observed.

8. Immediately following the timed observations, complete the Classroom Observation form.
9. Tally the timed observation data before leaving the school.

Context: For each child, count the number of 5-minute intervals for each Context code that was used. In the space provided under TOTALS on page 2 of the Pupil Observation Form, indicate the number of intervals for each Context. For example, if 7 intervals were “D” (whole class without teacher participation,) you would record “7C 3D.”

Content: For each child, count the number of 5-minute intervals for each Content code that was used. In the space provided under TOTALS on page 2 of the Pupil Observation Form, indicate the number of intervals for each Content area. In most instances, it will be the same for all 10 intervals: “10E.”

Coding Categories: For each child, you will count the total number of 5-minute intervals that the child was observed. Unless an observed child left the room furring the observation, this number should be the same for all four children. Write this number in the columns labeled “G1T”, “G2T”, “B1T”, and “B2T”. Then, for each child, you will count up the number of five-minute intervals that a coding category was checked. These numbers are to be recorded under TOTALS on page 2 of the Pupil Observation Form in the columns labeled “G1”, “G2”, “B1”, and “B2”. (Note: This number is never greater than the number of intervals the child was observed because each category can only be checked one time per 5 minute interval.)

School: _____ Date: _____
 Level: _____ Time: _____
 Teacher: _____ Observer: _____
 Content: _____ Observation #: _____

Pupil and Classroom Observation Form

- I. a. Describe any printed material visible to pupils in the classroom. What is on the walls? What is on the chalkboard?
- I. b. Are there any other visual aids or pictures (calendar, clock, etc.)? Yes ___ No ___ What?
- I. c. Describe any changes that occur during the time that you are in the school. (Does the teacher add posters or change what is on the chalkboard?)

- II. a. Language Usage: What percentage (approximately) of what the teacher says is in English, in Ghanaian, or in a mix of Ghanaian and English?

Teacher:	English	Ghanaian	Mix
A. During English class	_____	_____	_____
B. During change-over time	_____	_____	_____
C. During other subjects	_____	_____	_____
D. Outside of class at school	_____	_____	_____

- II. b. Language Usage: What percentage (approximately) of what the children say is in English, in Ghanaian, or in a mix of Ghanaian and English?

Children:	English	Ghanaian	Mix
A. During English class	_____	_____	_____
B. During change-over time	_____	_____	_____
C. During other subjects	_____	_____	_____
D. Outside of class at school	_____	_____	_____

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School: _____ Date: _____
 Level: _____ Time: _____
 Teacher: _____ Observer: _____
 Content: _____ Observation #: _____

II. c. Can you identify any patterns for when teachers or children use one language or another (e.g., when teachers discipline or praise children, instruction versus class management, when children talk to other children, etc.)?

II. d. List any functional English expressions that were part of the classroom routine.

III. a. Instructional strategies. Describe the lesson.

III. b. What strategies did the teacher use to assess oral language? (check all that apply)

- _____ Called on individual pupils to repeat phrase/word/sound
 _____ Choral response with signal to repeat phrase/word/sound
 _____ Called on individual pupils to give brief (e.g., yes/no) response
 _____ Choral response to give brief (e.g., yes/no) response
 _____ Called on individual pupils to give free expression response
 _____ Other: _____
 _____ None

III. c. What strategies did the teacher use to assess reading? (check all that apply)

- _____ Ask children to read aloud individually
 _____ Choral reading on signal
 _____ Ask comprehension questions
 _____ Other: _____
 _____ None

School: _____ Date: _____
Level: _____ Time: _____
Teacher: _____ Observer: _____
Content: _____ Observation #: _____

III. d. What did the teacher do when a child gave the wrong response or did not respond at all?
(check all that apply)

- _____ Call on another child
- _____ Provide feedback
- _____ Provide remediation-modeling the complete sequence
- _____ Provide remediation-analysis (breaking the task down)
- _____ Criticize the child
- _____ Encourage the child to try again
- _____ Ignore the error
- _____ Other: _____

III. e. Was the lesson adapted for low-performing pupils? Yes ___ No ___ If yes, how?

III. f. Was the lesson adapted or was there enrichment for quick learners? Yes ___ No ___ If yes, how?

IV. a. Note if there was any particular incident that seemed informative. Also note if the day or class was irregular for some reason.

b. Anecdotal comments?

IEQ/Mali:

Observation Guide for First and Second Grades

IEQ/South Africa:

- 1) Education Observation Protocol
- 2) INSET Core Classroom Observation Instrument
- 3) MET Core Classroom Observation Instrument
- 4) MET Classroom Resource and Environment Checklist

EDUCARE OBSERVATION PROTOCOL

1. Teacher Name(s): _____
2. Centre Name: _____
3. Centre Location: _____
4. Observer Name: _____
5. Time Observation Began: _____ Time Observation Ended: _____

THE CENTRE

1. Please make a tick in front of each thing the centre has:

- A clean classroom
- A schedule/plan for the activities that the children do during the day
- Child-sized tables and chairs
- A place for children to lie down
- Clean bedding for them to use to lie down
- A safe place to play outdoors
- A clean bathroom
- Colourful decorations on the walls
- Books for the children: About how many books are there? _____
- Toys/games for the children: please list some of the toys/games _____
- Educational materials
- Learning areas

RUNNING THE CENTRE

2. Please make a tick in front of each thing the centre has/does:
(Probe and note if food is brought from home.)

- A place to cook food
- Serves breakfast (Write down what food was given for breakfast)

- Serves snacks (Write down what food was given for snacks)

- Serves lunch (Write down what food was given for lunch)

Comments: _____

THE TEACHER

3. Teacher-Child Interaction:

- 1. Teacher calls on boys and girls equally
- 2. Teacher calls mainly on girls
- 3. Teacher calls mainly on boys
- 4. Teacher provides praise to all children
- 5. Teacher provides praise mainly to girls
- 6. Teacher provides praise mainly to boys
- 7. Teacher involves all children

4. How does the teacher discipline the children (tick all that apply)?

- 1. No discipline observed
- 2. Yells at the child
- 3. Hits the child
- 4. Punishes the child
- 5. Quietly reminds the misbehaving child of the rules
- 6. Separates the misbehaving child from other children
- 7. Other (specify)

5. How does the teacher praise the children (tick all that apply)?

- 1. No praise observed
- 2. Compliments the child
- 3. Hugs/touches the child
- 4. Gives the child a reward (i.e., more food, sweets, etc.)
- 5. Other (specify)

6. Does it appear that the teacher follows the daily schedule?

- 1. Yes
- 2. No
- 3. Can't tell

Comments: _____

THE CHILDREN

7. Classroom Engagement

Look at the entire class. Observe them for 5 minutes during a Large Group Activity, for 5 minutes during a Small Group (Free Choice) activity and for 5 minutes during Free Play. Tick off what the majority of children are doing when they are engaged in learning activities (A). Tick off what the minority of children are doing when they are disengaged (B). Write the number of children engaged in the activity and briefly describe the activity in the cell.

Behavior	Large Group	Small Group/Free Choice	Free Play
GROUP A: Engaged			
Played with books			
Played with toys			
Ate			
Played with other children			
Spoke with/called to teacher			
Cleaned up on their own			
Sang songs/chants			
Did art/wrote/coloured			
Played number/letter games			
Other			
GROUP B: Disengaged			
Sat quietly doing nothing			
Played alone			
Isolation/time out as punishment			
Fought with other child(ren)			
Other			

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-
8. Were the materials and equipment developmentally appropriate? Yes _____ No _____ Why?
9. Did the materials and equipment provide a wide range of experience? Yes _____ No _____ Why?
10. Was the environment rich and stimulating? Yes _____ No _____ Why?
11. Did the materials and equipment provide a wide range of experience? Yes _____ No _____ Why?
12. Was the interaction between teacher and children appropriate? Yes _____ No _____ Why?
13. Was the interaction between children and children appropriate? Yes _____ No _____ Why?
14. Draw the classroom arrangement.

IMPROVING EDUCATIONAL QUALITY (IEQ)
 INSET IMPACT ASSESSMENT STUDIES
 CORE CLASSROOM OBSERVATION INSTRUMENT

School code: _____ Date of observation: _____ Lesson start time: _____
 Teacher code: _____ Observer name: _____ Lesson end time: _____
 Standard: _____ Subject observed: _____ Number of learners: _____

Component 1: Use of a Variety of Teaching Methods

4	3	2	1
Teacher uses more than 2 teaching methods, all involve learners.	Teacher uses 1 or 2 methods that involve learners.	Teacher uses 1 or more methods that do not involve learners.	Teacher uses on method that does not involve learners.

Description: _____

Component 2: Use of Material by Learners

4	3	2	1
Learners share and all manipulate materials in groups or pairs.	Most learners share and manipulate all material.	Some learners manipulate while others watch.	None of the learners manipulate materials.

Description: _____

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Component 3: Use of Materials by Teacher to Enhance Learning

4	Uses more than 2 kinds of materials that enhance learning	3	Uses 2 kinds of materials that enhance learning	2	Uses 1 kind of material that enhances learning	1	Uses no materials/materials do not enhance learning
---	---	---	---	---	--	---	---

Description: _____

Component 4: Grouping of Learners

4	Uses flexible groups and assigned roles.	3	Uses flexible groups without assigned roles.	2	Uses permanent groups with or without assigned roles.	1	Whole class only (no groups).
---	--	---	--	---	---	---	-------------------------------

Description: _____

Component 5: Learner Work in Groups (skip Component 5 if answer to Component 4 is "1")

4	Groups of learners discuss problems, questions and activities.	3	Groups of learners with limited interaction.	2	Only one or two learners in a group interact.	1	Learners sit in groups but work as individuals.
---	--	---	--	---	---	---	---

Description: _____

Component 6: Critical and Creative Thinking Activities

4	3	2	1
Learners involved in discussions and problem-solving and/or creative activities.	Learners involved only in sharing of ideas.	Learners involved in teacher-directed activities.	Teacher lectures, learners listen to teacher.

Description: _____

Component 7: Questioning Skills

4	3	2	1
Teacher asks a variety of questions, including open-ended questions that probe for learners' understanding	Asks mostly close-ended questions and 1 or 2 open-ended questions.	Asks simple-recall questions only or close-ended questions.	Teacher asks no questions.

Description: _____

Component 8: Learners Asking Questions

4	3	2	1
Learners ask questions which show creative thinking even without teacher's encouragement.	Learners ask questions that show their thinking only when teacher encourages.	Learners ask simple questions only.	Learners ask no questions.

Description: _____

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Component 9: Teacher Feedback to Learners

4	3	2	1
Gives feedback about correct and incorrect responses in a manner that encourages further effort.	Gives feedback about incorrect responses only, in a manner that encourages further effort.	Gives feedback about correct responses only.	Gives no feedback/gives feedback in a manner that discourages further effort.

Description: _____

Component 10: Use of Language to Improve Learner Understanding (applies only in English medium lessons)

4	3	2	1
Integrates English and home language consistently.	Uses code-switching only when majority does not seem to understand.	Communicates only in English even when learners do not seem to understand/discourages use of home language.	Uses home language only.

Description: _____

Component 11: Opportunities for Learners

4	3	2
Boys and girls have equal opportunity to participate.	Only boys/only girls get opportunity to participate.	Learners have no opportunities to participate.

Description: _____

IMPROVING EDUCATIONAL QUALITY (IEQ)
 MIDLANDS EDUCATION TRUST (MET)
 CORE CLASSROOM OBSERVATION INSTRUMENT

School name: _____ Date of observation: _____ Lesson start time: _____
 Teacher name: _____ Observer name: _____ Lesson end time: _____
 Standard/s: _____ Number of learners: _____ No. boys _____ No. girls _____
 Lesson topic and unit: _____
 Is this a multigrade classroom? (Y/N) _____
 How are groupings in the class constituted? _____
 Pre-observation conference _____

Component 1: Teacher uses a variety of teaching strategies

4	Teacher uses more than 2 teaching strategies that involve learners.	3	Teacher uses 1 or 2 strategies that involve learners.	2	Teacher uses strategies that do not involve learners.	1	Teacher uses 1 strategy that does not involve learners.
---	---	---	---	---	---	---	---

Description: _____

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Component 2: Learners involved in active learning tasks

4	3	2	1
All learners manipulate materials.	Most learners manipulate materials. Others watch.	Some learners manipulate materials. Most watch.	Learners are not involved in active learning tasks.

Description: _____

Component 3: Teachers' use of materials including textbooks

4	3	2	1
Uses more than 2 kinds of materials.	Uses 2 kinds of materials.	Uses 1 kind of material only.	Uses no materials.

Description: _____

Component 4: How teachers correct learners' answers

4	3	2	1
Rephrases problem for same learner.	Redirects the problem to other pupils.	Corrects the error herself.	Does not notice or ignores error.

Description: _____

Component 5: Teachers feed back to learners

4	3	2	1
Gives feedback about correct and incorrect responses in a manner that encourages further effort.	Gives feedback to correct responses only and ignores incorrect responses.	No feedback.	Gives feedback in a manner that discourages further effort.

Description: _____

Component 6: Teacher questioning skills

4	3	2	1
Teacher asks a variety of questions, including open-ended questions that probe for learners' understanding and feeling.	Asks mostly close-ended questions and 1 or 2 open-ended questions.	Asks simple-recall questions only or close-ended questions.	Teacher asks no questions.

Description: _____

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Component 7: Teachers use of language to improve learner understanding (This component is not applicable if observing Sub A Zulu lesson)

4	3	2	1
Uses English only and learners understand.	Integrates English and home language effectively, encourages learners to communicate in home language and translates to English.	Communicates only in English even when learners do not seem to understand/discourages use of home language.	Uses mainly home language.

Description: _____

Component 8: Learners work in groups

4	3	2	1
Groups of learners discuss and there is a great deal of interaction.	Groups of learners are involved in activities and only a few interact.	Learners sit in groups but work as individuals.	Learners are not grouped.

Description: _____

Component 9: Learners' critical and creative thinking activities

4	3	2	1
Learners involved in problem-solving or creative activities.	Learners involved in discussions and sharing of ideas.	Learners involved in teacher-directed activities.	Teacher talks, learners listen to teacher.

Description: _____

Component 10: Extent and nature of learners talk to teacher

4	Offers unsolicited opinions.	3	Answers open-ended questions.	2	Answers close-ended questions.	1	No interaction.
---	------------------------------	---	-------------------------------	---	--------------------------------	---	-----------------

Description: _____

Component 11: Learners asking questions

4	Learners ask questions which show creative thinking even without teacher's encouragement.	3	Learners ask questions that show their thinking only when teacher encourages them.	2	Learners ask simple questions only.	1	Learners ask no questions.
---	---	---	--	---	-------------------------------------	---	----------------------------

Description: _____

Component 12: Learners' responses

4	Interact with teacher and each other about content in a relaxed way.	3	Learners are alert, responsive and interact with teacher.	2	Learners respond in a chorus.	1	Learners uninvolved.
---	--	---	---	---	-------------------------------	---	----------------------

Description: _____

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Component 13: Learner independence

4	Learners find information independently.	3	Learners make use of information sources when directed by teacher.	2	Learners follow teacher's instruction, working independently.	1	Unquestioning transcribing of text from board and textbooks.
---	--	---	--	---	---	---	--

Description: _____

Component 14: Learner activity when assigned tasks are completed (Ignore this component if the teacher teaches for the whole period.*)**

4	Work unaided with independent reading or other constructive tasks.	3	Work on anything.	2	Fool around.	1	Sit in silence.
---	--	---	-------------------	---	--------------	---	-----------------

Description: _____

Component 15: Strategies in multi-level classrooms (Ignore this component if it is a single-level class.*)**

4	Teacher sets meaningful tasks for other levels while interacting one level.	3	When teacher with one level others working on own tasks.	2	When teacher working with one level others sit around.	1	Teacher teaches as though all are one level.
---	---	---	--	---	--	---	--

Description: _____

Component 16: Opportunity to learn

4	3	2	1
Boys and girls have equal opportunity to participate.	Boys/girls* are afforded more opportunities to participate.	Learners not afforded any opportunity to participate.	Teacher is negative towards boys/girls*.

* Indicate if boy or girl.

Description: _____

FOR INTERVIEW/POST-OBSERVATION CONFERENCE

Look at any critical incidents in the classroom and ask questions about these incidents.

- For example, if teachers are using small group work instruction, ask “Where did you learn this from?” or
- If pupils initiate questions, ask the teacher about things he/she does to encourage these kinds of activities.

IEQ/Uganda:

- 1) Classroom Observation Instrument
- 2) Classroom Interaction: Modified Flanders

IEQ RESEARCH – PHASE 1

CLASSROOM OBSERVATION

District	_____	School	_____
Teacher	_____		
Class	_____	Subject	_____
Researcher	_____	Date	_____

Four observations will be done for classes P2, P4 and P6. This sheet should be filled out for every observation.

An observation should be for the entire period or for 40 minutes, which ever comes first. Please do not enter the classroom in the middle of a period and do not leave in the middle of a period unless the period is continuing past 40 minutes.

- 1a. How many pupils are in class today? _____
- 1b. How many girls are in class today? _____
2. How many pupils are clean and dress in clean clothes that are not torn?

5	_____	All
4	_____	More than 3/4
3	_____	More than 1/2, but less than 3/4
2	_____	More than 1/4, but less than 1/2
1	_____	Less than 1/4
0	_____	None
3. How many minutes of the total class time are spent on instruction/learning of the subject on the timetable? _____ minutes _____ % of total time
4. About how many pupils have pencils or pens? _____ Can't tell _____
5. About how many pupils have paper/notebooks? _____
6. Are pupils using textbooks in the lesson? Yes _____ No _____
7. About how often is English being used as the language of instruction:

4	_____	All the time
3	_____	3/4 of the time
2	_____	1/2 of the time
1	_____	1/4 of the time
0	_____	None of the time

8. What specific topics and skills are being covered in the lesson?
- 9a. Does the teacher appear to know the content fully? Yes _____ No _____ Can't tell _____
- 9b. Does the teacher tie the content/skills being covered into the daily life of the pupils/community?
Yes _____ No _____ Not applicable _____
10. Check the instruction methods the teacher uses (at least 10 minutes of lesson).
- ___ Lecture
 - ___ Having pupils work in groups
 - ___ Writing notes/drawing diagrams
 - ___ Marking books/papers at her/his desk
 - ___ Marking books/papers at pupils' desk
 - ___ Demonstrating experiments
 - ___ Working with individual pupils
 - ___ Answering pupil questions
 - ___ Group recitation
 - ___ Question and answer
 - ___ Other, please list: _____
11. What, if any, instructional materials are being used during the lesson?
- 12a. If pupils are using any materials, what are they doing with them?
- 12b. Do some pupils have more access to materials (e.g., textbooks) than other pupils?
Yes _____ No _____ Can't tell _____
- 12c. If yes, which types of pupils have more access?

13. What are the pupils doing? Please tick pupil activities.

- Writing
- Drawing
- Doing math problems
- Giving choral answers
- Reading out loud
- Reading silently
- Asking questions of the teacher
- Answering teacher's questions
- Talking with other pupils
- Misbehaving
- Other, please list: _____

14a. Does the teacher tell pupils how well they are doing in their work during the lesson?

Yes _____ No _____ Somewhat _____

14b. If yes, please describe how the teacher does that.

15a. Are pupils being given an opportunity to practice what they are learning? Yes _____ No _____

15b. If yes, please describe the opportunities and how many children are participating.

16a. Using the drawing, for the next ten minutes, put a tick by each pupil each time the teacher provides some attention to an individual attention (e.g., asks the pupil a question, calls on the pupil, praises the pupil, disciplines the pupil.)

16b. Are some pupils getting more teacher attention than others? Yes _____ No _____

16c. If yes, what types of pupils get the attention?

17a. Does the teacher discipline the pupils? Yes _____ No _____

17b. If yes, in what ways does the teacher discipline the pupils?

18a. Does the teacher praise the pupils? Yes _____ No _____

18b. If yes, how does the teacher praise the pupils?

18c. What types of pupils get the most praise?

19a. Do pupils appear to be interested in the class? Yes _____ No _____ Can't tell _____

19b. What indications are there that pupils are/are not interested?

20. Describe the class atmosphere.

Appendix B: Ghana and Guatemala Coding Systems

Category Definitions

1. Context (if the Context changes during the 5-minute interval, use the code that describes the Context that is used for the largest amount of time during the 5-minute interval):

- A = The observed child is part of a small group (approximately 3-8 children,) the teacher is present in the group
- B = The observed child is part of a small group, the teacher is not present in the group
- C = The observed child is part of a large group (could be the whole class) that is led by the teacher
- D = The observed child is part of a large group (could be the whole class); children have assigned work without teacher participation
- E = Transition time (passing out or collecting books, teacher writing assignment on chalkboard, class change-over time)
- F = Opening/ dismissal
- G = Recess or Physical Education or Break time

2. Content (if the Content changes during the 5-minute interval, use the code that describes the Content that is used for the largest amount of time during the 5-minute interval.)

- E = English
- M = Math
- SS = Social Studies
- Sc = Science
- O = Other _____ (in the space provided, write what other content is covered.)

3. Exposure to Print

Child has textbook: The observed child has an appropriate (English, Math) textbook on his/her desk.

Child uses textbook: The observed child opens the textbook and uses it appropriately. Example: turning to the correct Unit or reading a story silently or aloud.

Child shares textbook: The observed child has available a textbook that is to be shared with one or more other children.

Child uses shared textbook: The observed child uses appropriately a textbook that is shared with one or more children.

Child has exercise book: The observed child has an exercise book on his/her desk.

Child uses exercise book: The observed child uses an exercise book appropriately.

Child has other print: The observed child has other printed materials such as flash cards or a textbook from a different subject area on his or her desk.

Child uses other print: The observed child uses the printed materials.

Print on chalkboard: There are words or letters on the chalkboard.

New print on chalkboard: During the 5-minute interval the teacher or child writes new words or letters on the chalkboard.

Visual aids visible: Not including the chalkboard, there are posters or other visual aids that are visible to the observed child.

Visual aids used: During the 5-minute interval, the observed child is exposed to visual aids being used.

4. Oral Language-Speaking

Child speaks Eng to Teacher: The observed child individually speaks English to teacher. The speaking is not part of a choral response.

Child speaks Eng to other child: The observed child speaks English to another child in the class. (It could be part of the lesson or for some other reason such as requesting something.)

Child + Class choral Eng: The observed child speaks English as part of a choral response.

Child speaks Gha to Teacher: The observed child speaks a Ghanaian language to the teacher..

Child speaks Gha to other child: The observed child speaks a Ghanaian language to another child.

Child + Class choral Gha: The observed child speaks a Ghanaian language as part of a choral response.

5. Oral Language-Listening (The speaking could be singing, and it does not need to be part of the actual lesson.)

Teacher speaks Eng: The observed child is exposed to the teacher speaking English.

Other children choral Eng: The observed child is in the room when other children in the class use choral English.

Other child speaks Eng: The observed child is in the room when another child in the class speaks English.

Teacher speaks Gha language: The observed child is exposed to the teacher speaking a Ghanaian language.

Other children choral Gha: The observed child is in the room when other children in the class use choral Ghanaian.

Other child speaks Gha: The observed child is in the room when another child in the class speaks a Ghanaian language.

DIRECTIONS FOR CREATING A SEATING CHART

1. Draw the outline of the room. Label the location of the door, the chalkboard, and any windows.
2. Draw and label major features of the room (teacher's desk, cupboard, etc.).
3. Draw the tables and desks. Use a line for each desk.
4. Indicate the children with a B for each boy and a G for each girl.
5. Once you have labeled all of the boys and girls, ask the teacher to help you locate the children who were tested. Start with #1 and ask the teacher where the child sits. Write a 1 next to the B or G on your chart. Then ask about child #2, and so on. You will locate all of the children who were tested. Note any children who are absent on the side or back of the seating chart. Also note how many boys and girls were present in the classroom.
6. Clearly label the chart with the following information:

School name

Teacher's name

Level (P2, P3, P4, P5)

Date

Observers' names

USE SAMPLE CHART AS A GUIDE

ESTABLISHING INTER-OBSERVER RELIABILITY

Pupil Observation From

1. Two observers should observe simultaneously. One of the observers can be the CRIQPEG team member who is working with the teacher. The other observer should rotate amongst the other 3 team members.

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2. After preparing one seating chart, the two observers should agree as to which pupils will be observed. They should also set their watches to the same time, and start observing at the same time. Also, for both observers, the 5-minute intervals should be the same.
3. Each observer completes pages 1 and 2 of the Pupil Observation Form independently (including the totals.) Following the observation, the two observers should compare their Forms.
4. To compute percent agreement, the two observers should focus on the G1, G2, B1, and B2 columns in the TOTALS section of the form. Using only these columns, they should count up the number of times the total for each of the 26 categories for each observed pupil is different and the number of times the total is in agreement. The number of disagreements + agreements should total 104. There should be no more than 20 instances of "disagreement."
5. Discrepancies should be discussed. Any concerns or questions should be discussed with the team leader. If a discrepancy cannot be resolved, the coding done by the team member who is NOT working with the teacher should be recorded.

Classroom Observation Form

1. The observer who is NOT working with the teacher should complete this form.
2. This form is only completed of the observations in English lessons.
3. The observer who is working with the teacher may wish to complete a separate copy of the form as well. The information from this form may be useful in providing feedback to the teacher.

Pupil Observation Form

Date: _____
 School: _____
 Class: _____

Start time: _____
 End time: _____
 Observer: _____

5-minute intervals	: :		: :		: :		: :		: :		: :		: :		: :		: :				
	G1	G2	B1	B2	G1	G2	B1	B2	G1	G2	B1	B2	G1	G2	B1	B2	G1	G2	B1	B2	
Context																					
Content																					
Exposure to print																					
Child has textbook																					
Child uses textbook																					
Child shares textbook																					
Child uses shared textbook																					
Child has exercise book																					
Child uses exercise book																					
Child has other print																					
Child uses other print																					
Print on chalkboard																					
New print on chalkboard																					
Visual aids visible																					
Visual aids used																					
Oral Language-Speaking																					
Child speaks Eng to Teacher																					
Child speaks Eng to other child																					
Child + Class choral Eng																					
Child speaks Gha to Teacher																					
Child speaks Gha to other child																					
Child + Class choral Gha																					
Oral Language-Listening																					
Teacher speaks Eng																					
Other children choral Eng																					
Other child speaks Eng																					
Teacher speaks Gha																					
Other children choral Gha																					
Other child speaks Gha																					

Context
 A = Small gp-teacher present
 B = Small gp-teacher not present
 C = Large gp/whole class-led by teacher
 D = Large gp/whole class=assigned work without teacher participation
 E = Transition time
 F = Opening/dismissal
 G = Recess/PE

Content
 E = English
 M = Maths
 SS = Social Studies
 Sc = Science
 O = Other

Pupil ID#
 Girl 1: _____
 Girl 2: _____
 Boy 1: _____
 Boy 2: _____

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Pupil Observation Form

Page 2

Date: _____ Total time: _____
 School: _____ Observer: _____
 Class: _____ 2nd Observer: _____

	G1		B1		G2		B2		G1		B1		G2		B2		G1T		G2T		B1T		B2T	
	G1	G2	B1	B2	G1	G2	B1	B2	G1	G2	B1	B2	G1	G2	B1	B2	G1	G2	B1	B2	G1	G2	B1	B2
5-minute intervals																								
Context																								
Content																								
Exposure to print																								
Child has textbook																								
Child uses textbook																								
Child shares textbook																								
Child uses shared textbook																								
Child has exercise book																								
Child uses exercise book																								
Child has other print																								
Child uses other print																								
Print on chalkboard																								
New print on chalkboard																								
Visual aids visible																								
Visual aids used																								
Oral Language-Speaking																								
Child speaks Eng to Teacher																								
Child speaks Eng to other child																								
Child + Class choral Eng																								
Child speaks Gha to Teacher																								
Child speaks Gha to other child																								
Child + Class choral Gha																								
Oral Language-Listening																								
Teacher speaks Eng																								
Other children choral Eng																								
Other child speaks Eng																								
Teacher speaks Gha																								
Other children choral Gha																								
Other child speaks Gha																								

Context
 A = Small gp-teacher present
 B = Small gp-teacher not present
 C = Large gp/whole class-led by teacher
 D = Large gp/whole class=assigned work without teacher participation
 E = Transition time
 F = Opening/dismissal
 G = Recess/PE

Content
 E = English
 M = Maths
 SS = Social Studies
 Sc = Science
 O = Other

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OPERATIONAL DEFINITIONS

Interaction = An exchange, either verbal or non-verbal, between the principal actor (observed child or teacher) and another individual, group or object. An interaction ends when there is a change of person, object or topic.

1. Context:

- A = small group of 3 to 8 students directed by the teacher
- B = small group directed by one or more students
- C = group of 8 to 10 students directed by the teacher
- D = individual assignment done at the student's desk
- E = transition period: interruption, change or preparation before instruction begins.

2. Content:

- Ma = Mathematics
- Sp = Spanish
- NL = Native Language
- SS = Social Science
- NS = Natural Science
- PE = Physical Education
- NC = No content
- A = Art

3. Interaction:

- S = sequence: there is at least one response to an initiated interaction, verbal or non-verbal.
- SS = without sequence: when there is no response to an interaction, verbal or non-verbal.

4. Type of Interaction:

- Vsp = Verbal Spanish
- Vnl = Verbal native language
- NV = Nonverbal

5. Response:

- RVsp = verbal response in Spanish: any verbal response to an initiated interaction
- Rvnl = verbal response in the native language: any verbal response to an initiated interaction
- RNV = non-verbal response: any non-verbal response to an initiated interaction
- NR = no response: without a verbal or non-verbal response

6. Academic Behavior:

- NC = when there is no defined subject matter in the case of E and F
- Mat = interaction initiated by the observed child with books or instructional materials in the classroom for the purpose of learning

Ca	=	mathematics: any interaction that involves mathematics and that is not described in the Ca categories listed below
CaCon	=	practice counting: the observed child counts objects or numbers in different sequences
CaSum	=	practices assign: performs addition of two or more object or numbers
SaSub	=	practices subtraction: performs multiplication of two or more objects or numbers
CaMul	=	practices multiplication: performs multiplication of two or more objects or numbers
CaDiv	=	practices division: performs division of two or more objects or numbers
CaCop	=	copies numbers: the child reproduces numbers, whether digits or mathematical problems, from the blackboard or notebook without solving them.
CaFig	=	works with geometric figures: copies or produces geometric figures
Rea	=	reading: any interaction involving reading and that is not included in the Rea categories listed below
ReaVoc	=	practices vocabulary: reproduction, recognition, and identification of words or sentences which the child does not know
ReaEsc	=	makes multiple copies: copies letters, words, or sentences
ReaCor	=	repeats or reads in chorus or alone: orally repeats letters, words or sentences in unison
ReaPal	=	develops words/sentences: makes or forms new words or sentences
ReaIns	=	follows written instructions: performs what is requested in writing, either on the blackboard, a book or a guide
ReaLee	=	independently reads books or dictionaries: reads or looks up words, sentences or texts in books or dictionaries on his/her own initiative
ReaCom	=	reading comprehension: demonstrates understanding of what he/she reads or has read to him/her through verbal or written behavior
Crea	=	creative expression: any interaction involving creativity which is not included in the other Crea categories listed below (creativity = original production of the child)
CreaArte	=	expression through drawings, stories, verbal or written, or dramatizations in an original manner
CreaEscoj	=	chooses a topic about which to read or write: selects for him/herself what he/she wants to read or write
CreaResp	=	produces spontaneous responses: intervenes, contributes or expands the knowledge of something through his/her own knowledge or experience with more than a yes or no answer
Est	=	emotional state: any interaction with a socio-emotional content that is not described in the following Est categories
EstTurn	=	works with others: works in collaboration with others without merely correcting or monitoring their progress
EstOp	=	expresses opinions or activities before others: says what he/she thinks of feels to others in relation to school work
EstDirige	=	gives instructions to other(s): directs the work or activity of a student or various classmates in relation to work in the classroom

- EstSigue = follows instructions: follows directions given by another student(s) or the teacher related to classwork
- EstDar = provides positive feedback: gives positive reinforcement related to classwork to another student(s)
- EstRecib = receives positive feedback: is given positive reinforcement related to classwork by other children or the teacher
- EstNeg = receives negative feedback: is criticized in relation to schoolwork by other students or the teacher, either verbal or non-verbally (physical punishment)
- EstDarneg = gives negative feedback: criticizes another student(s) in relation to classwork
- EstAyuda = provides help: provides help to another student(s) in relation to schoolwork