NARRATIVE SUMMARY OF COMPARATIVE STUDY
on
LCE/CA in SIP and non-SIP Classrooms

One of the tasks for the BES II LCE/CA consultancy beginning in September 2003 was to work with Circuit Support Team members to develop and implement a comparative study on the use and effects of Continuous Assessment and Learner Centered Education strategies in SIP and non-SIP classrooms. These strategies have been the focus of teacher professional development activities in all four of the original regions where SIP schools are located. [Note: Ondangwa East and Ondangwa West, two of the regions in the original BES II Project, have both been divided into two regions each. Schools in all four of the new regions are included in the study.]

On 25 June 2003, the consultant met with Mohammed Liman, Godfrey Tubaundule, and Demus Makua to discuss this task and begin work on designing the study. One issue discussed in our meeting was the constraints on testing lower primary learners. Mr. Makua explained that the MBESC policy states that children cannot be tested for purposes of promotion from one grade to the next. Although using a test of learner performance might have been on option for data collection in this study, given the history and previous constraints, the design team decided to design our study using the approach of non-written performance criteria. For discussion, conceptualization, and planning, the following five steps were proposed and followed:

1. Develop a stratified sample of SIP and non-SIP schools
2. Identify the criteria to be observed and measured
   - Develop the strategies for measuring the criteria.
3. Develop data collection instruments based on the above criteria and measurement strategies.
4. Identify and train data collectors.
5. Collect data.
6. Analyze data and write a draft report.

After the consultant left the country, the discussion regarding the study's design and the criteria continued via e-mail.

1. <u>Develop a stratified sample of SIP and non-SIP schools</u>

For purposes of this study, three strata were agreed on: urban lower primary classrooms, semi-urban lower primary classrooms, and rural lower primary classrooms. While these suggested strata are not 'official' demarcations, they do suggest possible environments that could affect the schools and the learners in them.

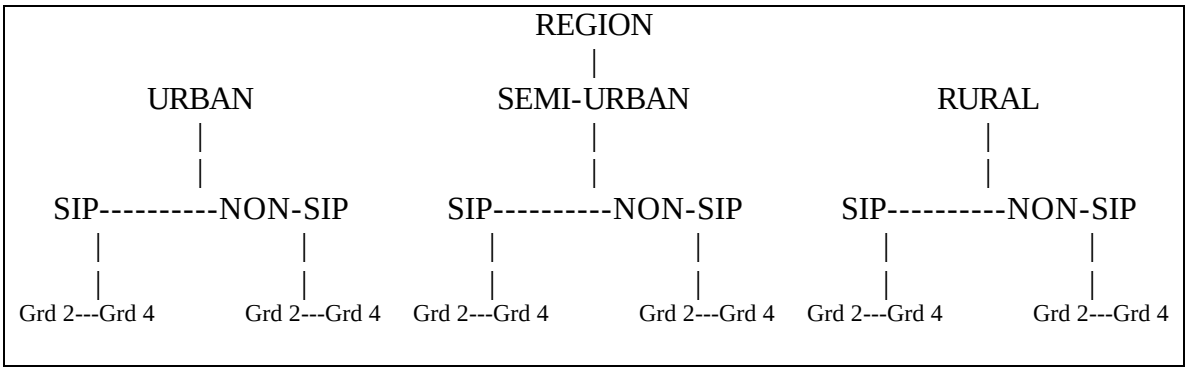
- The typical criteria for defining an urban area were used: major road(s) pass through the area; government administrative offices are located there; police, fire, electric, water services are available; easy access to communication services such as telephone, radio, television.

- The semi-urban area is defined as one having close proximity (15-20 kms.) to a major road; access to public transportation; a clinic or a post office; access to a telephone, potable water, electricity. (Most but not all of these criteria present.)
- Rural area is beyond the semi-urban and lacks most of the services described. It is often off-road and isolated during the rainy season.

An assumption was made that learners in any one of these areas had more in common socially and economically.

[The consultant made inquiry to the Regional Planner of the National Planning Commission whether NPC had any data using the demarcations suggested. He said they did not, but he was interested in the concept and would probably look into it.]

In each of these strata an SIP and a non-SIP school was selected and then a second and a fourth grade classroom in each school would be selected for observation. See diagram of the sample below:



To control the distances to be traveled, the decision was made to randomly choose a 'cluster' within each urban, semi-urban, and rural area and randomly choose an SIP and a non-SIP school in that cluster. In a couple of cases the different schools did not exist in the cluster. In those cases a school in an adjacent cluster was randomly chosen.

Two publications were used to identify the schools in the Ondangwa East and Ondangwa West Regions (note: old regional designations). The Research and Information Services of Namibia published these documents. The schools in the Caprivi and Kavango Regions were selected using the data base maintained by the GTZ. In our original choice the urban to rural continuum was strictly adhered to. In the process of notifying and locating the schools, it was sometimes found that the distinctions did not clearly exist, or that some primary schools had been up-graded to combined schools and no longer had lower primary grades. For these and other reasons substitutions had to be made two days before the data collection was to begin in two regions, sometimes out of the original cluster. This corrupted these strata of the sample, but we decided to proceed as planned and leave out an analysis of those strata.

2. Identifying the criteria to be observed and measured.

If this were strictly a study to determine the learning effects of CA or LCE teacher training, we would need to design a controlled study. As many variables that might affect the training of the teachers and their acquisition of the skills in question would have to be controlled. This would necessitate designing and implementing a pre-, post-test type of study – i.e. the Solomon 4 Square, etc. However, the intent here was to design a descriptive study that shows a broader range of teacher skills and behaviors acquired in SIP workshops and observed in subsequent classroom visits. The assumption, backed by a large body of education research literature in similar settings, is that these teaching strategies and behaviors can lead to improved learner achievement. The study is designed to focus on some of the most viable skills and behaviors associated with Continuous Assessment and Learner Centered Education as defined in MBESC and NIED policy documents and that have been emphasized in the SIP teacher training activities. In the study we will attempt to compare and measure them in the two environments:

- The correct use of the teaching skills and behaviors related to CA and LCE the classroom,
- General classroom atmosphere.

Looking at the two criteria – Continuous Assessment (CA) and Learner Centered Education (LCE) – the strategies for finding if these are being used in the classrooms will be:

1. Direct classroom observation, noting if teachers use CA and LCE
   - if so, at what frequency
   - how effective, etc.
2. Examine teacher records:
   - Lesson plans – are the proper use of CA and LCE included as part of the plan?
   - Examine most recent 'marking forms' required by the MoE – do they appear accurate and based on real data?
   - Class lists – does the teacher have and use a 'class list' to record assessments during class activities?

In a descriptive study of this kind, 'anecdotal reports' are often helpful in describing activities and showing results. Using video to gather information and selectively show examples in a report is helpful and extends the use of video as a training tool. In a summary report video demonstrates in a way other than words how this medium has been used in the project. The question is what to record and how to analyze it. The decision was made to record 30 minutes of each of the two classes in one of the schools each day. SIP and non-SIP schools would be videotaped alternately.
(See Schedule, Annex)

3. Develop data collection instruments based on the above criteria and the measurement strategies.

The decision was made expand the sections of the 'Classroom Observation Form' focusing specifically on LCE and CA classroom activities. We have confidence in this instrument since it was developed, tested, and is currently in use in the SIP schools. The

Classroom Observation Form was designed based on MBESC and NIED policy implementation guidelines developed to support Namibia's Lower Primary Reform efforts.

This exercise focused directly on the learner and the effect teacher behaviors have on the learners' acquisition of the lower primary curriculum objectives. The observation items in the LCE and CA forms were written to focus the data collectors' attention on the learners' behavior and the teacher's effect on this behavior. We wanted to know as specifically as possible what effect our work with teachers in workshops had on their learners in the classroom. Also included with each item on the form were six boxes where the data-collectors would be instructed to note evidence of the behaviors observed. (See Annex #1)

The Continuous Assessment instrument also contained three items that needed brief answers to be written:

- When asked if CA was included in the lesson, what was the response?
- Inspect the teacher's lesson plan, did it specify assessment activities?
- Inspect the 'class list' teacher used to record assessments during lesson?

(See Annex #2)

These observation forms were tested in a few classrooms and found to be operational.

4. Identify and train data collectors

To reduce the possibility of any halo effects in the results of the study, observation teams were not be directly involved with the SIP or non-SIP schools – i.e. teachers, advisory teachers, resource teachers, circuit inspectors, etc. However, to cut down on the training time necessary to prepare observers it was necessary to recruit individuals who knew something about primary education and teaching in Namibia. Four observers were recruited from the Education Faculty of the University of Namibia.

Training was conducted in the MBESC offices in Windhoek. A number of documents and two videotapes were used in the training. The documents included:

- 'Data Collector's Instructions' – contained all of the information needed to complete the assignment in the field, from reporting to the principal of the assigned school, choosing the two classes to be observed, and details about completing the observation forms.
- 'LCE Checklist' – gave detailed information about what to consider when completing each item on the LCE Observation Form.
- 'Continuous Assessment Guide' – included detailed information about what to consider when completing each item on the CA Observation Form.
- The LCE and the CA Observation Forms (Annexes 1 and 2).

The two videotapes had been made in actual 2nd and 4th Grade classrooms. In the 2nd grade videotape the teacher used a number of LCE and CA strategies. The 4th Grade lesson was more traditional and was more teacher centered. It did, however, contain examples of CA strategies.

In the training session the 'Instructions' were read and discussed first. The data-collectors read the LCE checklist together with the 'LCE Observation Form' and the CA Guide and 'CA Observation Form" after which both were briefly discussed. The videotapes were then viewed by the data collectors and stopped frequently by the trainer while teacher/learner behavior on the tape was discussed and how it would be noted on the Observation Forms. Following these discussions and practice, the collectors were free to play the tapes again and discuss them and the observation procedures among themselves. The trainer was available to answer any questions.

At no time were any of the specifics of the study revealed to the data collectors. They were told 'this was part of a BES II continuing effort to study the Government's education reforms in lower primary classrooms.' The drivers were told not to tell the collectors which schools were SIP schools and which were not. Any information regarding SIP or non-SIP schools was eliminated from the collectors' schedules.

5. Data Collection.

Data were collected in the designated schools beginning on Monday, 20 October 2003 and was completed the end of the school day Monday, 27 October 2003. Two data collectors were assigned to the Caprivi and Kavango Regions and were transported to the schools from Windhoek by a BES II driver. The other two data collectors were assigned to the Ondangwa East and West Regions (old designations). They flew to Ondangwa and were transported to their schools by a driver arranged by the SIP Project. All collectors remained on-site throughout the collection period and returned to Windhoek on Tuesday, 28 October 2003.

The daily activities of each data collection team follows:

- One member of the team will observe a 2nd and 4th grade classroom in the SIP school in the designated cluster;
- The other member of the team will visit the non-SIP school in the same or adjacent cluster.
- On the following day the team will observe in the two different schools in a different cluster, but in the same region.
- Each team will finish observing six schools in one region in three days, then move to the next region, completing the two regions in six days.

As noted above, in addition to the textual data anecdotal video was collected in SIP and non-SIP schools randomly selected each day. Resource Teachers assigned to each region videotaped these classrooms during the period of observation. The videotapes will not be systematically evaluated, but will provide anecdotal information to illustrate and support the systematically analyzed textual data.

Data analysis follows:

ANALYSIS OF LCE OBSERVATIONS

SIP observation percentages were greater than non-SIP observations for all items except one. (See below) This seems significant because these strategies that were the items in the observation instrument are the 'hallmarks' of Learner Centered Education as developed and explained in the NIED document, *Policy Guide, Lower Primary Phase*. These items are taken directly from the document noted above and are also the guides for SIP workshops in developing presentations, materials, and video models of classrooms where LCE strategies are being practiced. These materials and video taped models have also been used extensively in the regions by the resource teachers and others working directly with the teachers.

The two areas of teacher behavior observed in this study were Learner Centered Education (LCE) and Continuous Assessment (CA) in use in lower primary classrooms. These have been two of the major activities in the training program. In this analysis it is interesting to note how these two strategies begin to interact. These points of interaction will be noted in the comments in the Tabulations and Percentage tables that follow. For training purposes strategies are often isolated and presented separately for convenience as they were in this program. The danger is that teachers begin to think that when the focus changes from CA to LCE, they are finished with CA. What is found in the analysis suggests that rather than developing individual teaching strategies, teachers are beginning to develop a continuum of teaching strategies that include both LCE and CA and thus are becoming interdependent.

Four items had a difference of 25 percentage points or greater: (See following table for details.)

- **Learners help each other** – 29 pts.
- **Learners work in pairs** – 25 pts.
- **Learners receive feedback about their performance** – 25 pts.
- **Learners check each other's work** – 25 pts.

One item had a difference of 20 percentage points:

- **Learners are actively engaged in the lesson** – 20 pts

Two items had a difference between 15 and 19percentage points:

- **Learners participate in a variety of teaching/learning activities** – 17 pts.
- **Learners work in groups** – 16 pts.

Four items had a difference between 10 and 14 percentage points:

- **Learners have responsibilities for housekeeping in the classroom –** 13 pts.
- **Lessons are based on learners' prior knowledge or experience –**12 pts
- **Learners help each other –** 12 pts
- **Learners play learning games and/or role plays –** 10 pts

Two items had a difference of less than 10 percentage points:

- **Learners talk and act more than listen inactively –** 8 pts
- **Learners respond to a variety of questioning techniques –** 5 pts.

'**Learners initiate questions'** was the exception where SIP classrooms showed a lower percentage of use than non-SIP. 8% was recorded for SIP and 16% for non-SIP classrooms, very low for both groups. Learners interrupting or challenging a teacher is generally not expected in the Namibian setting. It must be assumed that perhaps asking any question would carry the same restriction. This could explain the low scores for this behavior in both groups. Furthermore, teacher training activities have not focused on this behavior. Encouraging learners to initiate questions is a teaching skill that needs to be specifically emphasized and practiced, especially in a social context where children are expected to respond to adults rather than initiate interactions.

LCE TABULATION AND PERCENT BY RANK ORDER

1. Learners participate in a variety of teaching/learning activities.

LCE 2	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**22**	**92**	**18**	**75**
No	**2**	**8**	**6**	**25**
Total	**24**		**24**	

COMMENT:

Re-directing the center of classroom activities from the teacher to learner activities has been a major focus of the SIP workshops and follow-up classroom visits. Games and activities have been suggested and demonstrated at workshops. Model videotapes have been made in classrooms of SIP teachers and have been circulated to other teachers in the regions. This LCE strategy had the highest percentage of application in SIP classrooms – 92%, and may indicate a beginning movement away from teacher control to learner control in which learners begin to assume responsibility for teaching-learning activities.

The highest ranked LCE strategy in the NON-SIP classrooms was 'learners' response to a variety of questioning techniques'. This may indicate that the teacher is still largely in control, and learners do not yet have responsibility for learning activities.

2. Learners receive feedback about their performance.

LCE 13	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**22**	**92**	**16**	**67**
No	**2**	**8**	**8**	**33**
Total	**24**		**24**	

COMMENT:

This LCE strategy also was observed in 92% of observed classrooms. This high rating was probably due to the emphasis on and effort to help SIP teachers understand and use Continuous Assessment in all of their lessons taught. Developing and applying assessment strategies as part of each lesson plan written has probably lead teachers to be conscious of the need to provide learners with feedback about their performance during each step of the learning process.

3. **Learners respond to a variety of questioning techniques.**

LCE 9	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**21**	**88**	**20**	**83**
No	**3**	**12**	**4**	**17**
Total	**24**		**24**	

COMMENT:

Teachers have been encouraged to use questions that challenge learners to develop thinking skills and use what they are learning. Teachers may be abandoning the 'yes-no', 'fill-in the blank' type of question. The use of higher-order questions has been discussed with opportunities to write and include these questions as part of planning and eventual implementation in the classroom.

4. **Learners are actively engaged in the lesson.**

LCE 3	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**20**	**83**	**15**	**63**
No	**4**	**17**	**9**	**37**
Total	**24**		**24**	

COMMENT:

This strategy is probably the one that most sets LCE from traditional Teacher Centered Education (TCE). TCE encourages learners to be passive and follow teacher directions. The teacher directs and controls activities and learners wait for and follow these directions. The teacher's role in and LCE class is more of a 'facilitator' and provider of learning activities that learners work on and complete on their own.

5. **Lessons are based on learners' prior knowledge and experience.**

LCE 1	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**19**	**79**	**16**	**67**
No	**5**	**21**	**8**	**33**
Total	**24**		**24**	

COMMENT:

The use of assessment strategies as an integral part of planning and teaching keeps a teacher 'tuned' to where the learners are in terms of their acquisition of knowledge and skills. This has been a part of the SIP's work with teachers. The whole process of Continuous Assessment -- getting, recording, and analyzing information about each learner's acquisition of the competencies stated in the Grade Syllabi -- allows teachers to begin each lesson for each learner based on his/her achievements or needs.

6. Learners talk and act more than listen inactively.

LCE 10	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**17**	**71**	**15**	**63**
No	**7**	**29**	**9**	**37**
Total	**24**		**24**	

COMMENT:

This is one of the items that had a small difference – 8 pts – between SIP and non-SIP classrooms. Teachers in most schools in the north have had considerable help in organizing and using groups in their classrooms. Groups in general usually require learners to talk and act. But, while many non-SIP classrooms did have learners divided into groups, often all of the groups were involved in the same task. (See #8 below)

7. Learners work on individual assignments.

LCE 7	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**14**	**58**	**11**	**46**
No	**10**	**42**	**13**	**54**
Total	**24**		**24**	

8. Learners work in groups.

LCE 5	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**13**	**54**	**9**	**38**
No	**11**	**46**	**15**	**62**
Total	**24**		**24**	

COMMENT:

Only those classrooms where groups were observed working on different activities were given a 'yes' for this item.

9. Learners help each other.

LCE 8	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**12**	**50**	**5**	**21**
No	**12**	**50**	**19**	**79**
Total	**24**		**24**	

COMMENT:

This item had the greatest percentage point difference in the study – 29 pts. This was one of the strategies most emphasized in the training and in the model videotapes. This is one of the most important strategies for teachers

to understand and use in developing an LCE classroom. When learners are working in different groups completing different activities, the teacher cannot be in all groups at once to assist learners needing help. An environment must exist where learners who understand the task can assist those who do not.

10. Learners check each other's work.

LCE 14	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**10**	**42**	**4**	**17**
No	**14**	**58**	**20**	**83**
Total	**24**		**24**	

11. Learners have responsibilities for housekeeping in the classroom.

LCE 12	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**9**	**38**	**6**	**25**
No	**15**	**62**	**18**	**75**
Total	**24**		**24**	

12. Learners work in pairs.

LCE 6	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**9**	**38**	**3**	**13**
No	**15**	**62**	**11**	**87**
Total	**24**		**24**	

13. Learners play learning games and /or role-plays.

LCE 11	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**6**	**25**	**3**	**13**
No	**18**	**75**	**21**	**87**
Total	**24**		**24**	

14. Learners initiate questions.

LCE 4	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	**2**	**8**	**4**	**16**
No	**22**	**92**	**20**	**84**
Total	**24**		**24**	

ANALYSIS OF LCE OBSERVATIONS BY GRADE

A cross-tabulation was calculated for all SIP and non-SIP schools in the sample. These results have been presented and discussed above. Also cross-tabulations were calculated for Grades 2 and 4 in the SIP and non-SIP schools. While there were no prominent differences between Grades 2 and 4 in SIP and non-SIP schools, some differences observed in Grade 4 that could indicate a trend might need attention in the future.

The highest percentages of 'Yes' observations for LCE strategies in Grade 2 SIP classrooms were:

1. **Learners participate in a variety of teaching/learning activities.**
2. **Learners receive feedback about their performance.**
3. **Learners respond to a variety of questioning techniques.**
4. **Learners are actively engaged in the lesson.**
6. **Learners talk and act more than listen inactively.**
7. **Learners work on individual assignments.**
8. **Learners work in groups.**
9. **Learners help each other.**
10. **Learners check each other's work.**
11. **Learners have responsibilities for housekeeping in the classroom**
12. **Learners work in pairs.**
13. **Learners play learning games and /or role-plays.**
14. **Learners initiate questions.**

The only strategy that did not have a higher percentage in Grade 2 SIP was:

5. **Lessons are based on learners' prior knowledge and experience.**

And it was a 'draw' – there was no difference between SIP and non-SIP. This speaks well for the training designed for the teachers in Grade 2 classrooms in SIP schools. Workshops focusing on group activities, rationales and methods for dividing learners into groups, videotaped models of LCE methods, and supervision using video playback are only a few of the ways the Project has helped classroom teachers in SIP schools.

The highest percentages of 'Yes' observations for LCE strategies in Grade 4 SIP classrooms were:

#1, #2, #5, #8, #9, #10, #11, #12, #13. (See list above for LCE item titles.

The highest percentages of 'Yes' observations for LCE strategies in Grade 4 SIP classrooms were:

3. **Learners respond to a variety of questioning techniques.**
4. **Learners are actively engaged in the lesson.**
6. **Learners talk and act more than listen inactively.**
7. **Learners work on individual assignments.**

While these four strategies are undeniably LCE strategies they all have nothing to do with group activities. They are all focused on the individual learner. Perhaps the trend away from groups and toward the individual learner is due to the observation that many Grade 4 teachers begin to lecture more and there is less focus on group activities in non-SIP

classrooms. If this is the case, more emphasis needs to be placed on Grade 4 and the older children relative to LCE practice in the classrooms. Most of the model videotapes have been made with younger children in 2nd and 3rd Grade classrooms. It is doubtful this would make a difference, but the cause, whatever it is, should be investigated.

1. Learners participate in a variety of teaching/learning activities. [2]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	91	67	24
4	92	90	2

2. Learners receive feedback about their performance. [13]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	100	75	25
4	77	67	4

3. Learners respond to a variety of questioning techniques. [9]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	92	75	17
4	83	100	-17

4. Learners are actively engaged in the lesson. [3]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	92	67	25
4	69	75	-6

5. Lessons are based on learners' prior knowledge and experience. [1]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	75	75	0
4	77	70	7

6. Learners talk and act more than listen inactively. [10]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	92	58	34
4	50	80	-30

7. Learners work on individual assignments. [7]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	58	50	8
4	54	67	-13

8. Learners work in groups. [5]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	60	50	10
4	54	38	16

9. Learners help each other. [8]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	42	25	17
4	54	22	32

10. Learners check each other's work. [14]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	42	25	17
4	39	11	28

11. Learners have responsibilities for housekeeping in the classroom [12]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	42	33	9
4	31	22	9

12. Learners work in pairs. [6]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	33	8	25
4	42	22	20

13. Learners play learning games and /or role-plays. [11]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	27	17	10
4	25	11	14

14. Learners initiate questions. [4]

Grade	SIP - % Yes	Non-SIP - % Yes	Difference
2	0	17	-17
4	15	25	-10

ANALYSIS OF CA OBSERVATIONS

With the exception of one item (see #2 below) all SIP observation percentages were greater than the non-SIP percentages. This is significant because these items came directly from the NIED document, *Policy Guide, Lower Primary Phase*, and represent much of the focus of the CA training designed and presented to SIP teachers during workshops. A large portion of the training used video models, microteaching, and interactive videotapes to explain and give teachers a chance to practice the concepts indicated in the items.

One item had a 29 percentage point difference between SIP and non-SIP classrooms – item #4 below:

- **#4 While assessing one group, Teacher monitors all groups during assessment activities.**

The other five items had a percentage difference that ranged from17 to 0.

- **#5 Teacher uses a 'class list' to keep records of assessments for each learner in the group(s) – 17 pts.**
- **#1 Teacher gives immediate feedback to learners during the lesson – 13 pts.**
- **#3 CA activities are based on learning objectives – 12 pts.**
- **#6 Teacher uses assessment from learners to change or adapt the lesson – 8 pts.**
- **#2 Teacher uses a variety of assessment strategies – 0 pts.**

All teachers in both SIP and non-SIP schools have access to all of the previously published materials about Continuous Assessment (CA) and its implementation in the classroom. The National Institute for Educational Development (NIED) has gone to great effort and expense to publish and conduct workshops nation-wide to help teachers understand and implement CA in their classrooms. Early in the implementation of the BES II project, the consultant visited schools in all parts of the country to observe teacher use of CA. While all teachers seemed to understand the 'nuts-and-bolts' of CA, the need for it, the forms for recording it, and complete instructions on 'how-to-do-it', most of the teachers in the BES II target regions did not understand the concept of CA.

When this problem was discussed with Regional Education Officers, Circuit Inspectors, Advisory Teachers, and Principals, the decision was made to focus on teacher understanding of the concept of CA. A parallel decision was also made to employ model videotapes of teachers using CA in their classrooms. This ultimately became an important training tool in the project. Rather than receiving only intellectual information, teachers could actually observe CA by watching fellow teachers demonstrating the behaviors they had been reading about. At two SIP training activities, the technique of microteaching was used so teachers could practice the skills of CA and receive immediate feedback about their practice.

Probably the consistently higher percentages of these CA behaviors found in SIP classrooms is due largely to the continued use of this technique of using video models by the dedicated classroom supervisory staffs.

CA TABULATIONS AND PERCENTAGES BY RANK ORDER

1. Teacher gives immediate feedback to learners during the lesson.

CA 5	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	23	96	20	83
No	1	4	4	17
Total	24		24	

COMMENT:
This CA strategy acquired and practiced by a teacher relates directly to LCE strategies #2 and #5 discussed in 'LCE TABULATIONS AND PERCENTAGES BY RANK ORDER'. This is the highest percentage recorded on any item in the study. This indicates that it was probably learned well and is used by SIP teachers as a total part of their planning and teaching.

2. Teacher uses a variety of assessment strategies.

CA 3	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	21	88	21	88
No	3	12	3	12
Total	24		24	

COMMENT:
Items 2 through 6 below, represent the focus of the model videotapes discussed above. A 'working' understanding of the behaviors these items represent was probably developed over time by the supervisory staffs who used the model videotapes. These tapes became a focus for the classroom teachers understanding of what had been viewed by many teachers and 'just another administrative requirement'.

3. CA activities are based on learning objectives.

CA 4	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	20	83	17	71
No	4	17	7	29
Total	24		24	

4. **While assessing one group, Teacher monitors all groups during assessment activities.**

CA 8	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	19	79	12	50
No	5	21	12	50
Total	24		24	

5. **Teacher uses a 'class list' to keep records of assessments for each learner in the group(s).**

CA 7	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	16	67	12	50
No	8	33	12	50
Total	24		24	

COMMENT:

The use of a 'class list' has been emphasized in every model videotape produced. Previously, many teachers said they just remembered what individual learners had done during CA activities and recorded it later at home or elsewhere. (The ability to do this for 30+ learners is moot.) Focusing on this behavior seems to have had an added benefit especially in LCE classrooms; teachers are forced to look closely at individual learner behavior during assessment. This can make teachers more aware of individual differences and is reflected in the teacher's ability to organize and assign learners to small groups. (See items #8,, #9, #10, #12, in the LCE Analysis.)

6. **Teacher uses assessment from learners to change or adapt the lesson.**

CA 6	SIP Number	SIP Percent	NON-SIP Number	NON-SIP Percent
Yes	11	46	9	38
No	13	54	15	62
Total	24		24	

ANALYSIS OF CA OBSERVATIONS BY GRADE

Some differences did appear when the tabulations were compared by grade. Grade 2 'Yes' percentages were consistently higher than those of Grade 4. Perhaps this is because teachers begin to lecture more and there is less focus on assessment strategies by both SIP and non-SIP teachers. If this is the case, more emphasis needs to be placed on Grade 4 and the older children. Most of the model videotapes have been made in 2nd and 3rd Grade classrooms. It is doubtful this would make a difference, but it should be investigated.

The greatest difference between 2nd and 4th Grade classes in both SIP and non-SIP classrooms is Item number 4 – '**While assessing one group, teacher monitors all groups during assessment activities.'** This strategy was one of the most difficult for teachers to adopt and use. In all training materials care was taken to model and explain this strategy. Evidently the care taken paid off as the results indicate.

The highest percentages of 'Yes' observations for SIP Grade 2 classrooms for the CA strategies were:

#1 Teacher gives immediate feedback to learners during the lesson.
#3 CA activities are based on learning objectives.
#4 While assessing one group, teacher monitors all groups during assessment activities.
#5 Teacher uses a 'class list' to keep records of assessments for each learner in the group(s).
#6 Teacher uses assessment from learners to change or adapt the lesson.

All of these items were carefully and thoughtfully included in the training in the SIP workshops. These behaviors are important taken as a whole since they show that the teacher has and uses accurate information about what their learners know and can do.

Number 3 was the focus of a unit in lesson plan development. The use of the grade syllabi was emphasized. Teacher attention was directed toward the inclusion of learning objectives, learning competencies, as well as assessment strategies in every lesson plan they wrote and used. All of these components were illustrated in the videotapes eventually produced and used in workshops.

Numbers 1, 4, 5, and 6 are all topics discussed and illustrated in the training videotapes we have produced and used in the SIP Regions

The highest percentage of a 'Yes' observation for a non-SIP Grade 2 classroom for a CA strategy was:

#2 Teacher uses a variety of assessment strategies.

[Note: In items #1 and #2, 100% 'Yes' responses are reported. It is doubtful that any teacher behavior can happen in all classrooms even most of the time. This is probably an artifact of data collection and arises due to the 'snap-shot' nature of

the study. All of the classroom observations were recorded in the brief period of six days. By chance on the one day the observation was completed the behavior was 100%. If observations were made in those classrooms over time, the artifact would probably disappear.]

The highest percentages of 'Yes' observations for SIP Grade 4 classrooms for the CA strategies were:

#1 Teacher gives immediate feedback to learners during the lesson.
#2 Teacher uses a variety of assessment strategies.
#4 While assessing one group, Teacher monitors all groups during assessment activities.
#5 Teacher uses a 'class list' to keep records of assessments for each learner in the group(s).

This parallels what was observed in Grade 2.

The highest percentages of 'Yes' observations for non-SIP Grade 4 classrooms for the CA strategies was:

#3 CA activities are based on learning objectives.
#6 Teacher uses assessment from learners to change or adapt the lesson.

As was noted in the analysis of the LCE strategies used in Grade 4, there seems to be general 'backsliding' in the percentage of strategies observed in Grade 4. Perhaps as the learners become proficient in English, the language of instruction, and less explanation is required, teachers begin to lecture. Surely, lecturing is the dominant method of instruction in Grades 5 through secondary school. Perhaps teachers and learners view this as a transition period. Whatever the reason, more attention needs to be focused on this in the future in supervision and the production of training materials.

CONTINUOUS ASSESSMENT RANK ORDER OF TABULATIONS BY GRADE

7. Teacher gives immediate feedback to learners during the lesson. [5]

Grade	SIP - %Yes	**Non-SIP - %Yes**	Difference
2	**100**	**92**	**8**
4	**87**	**80**	**7**

8. Teacher uses a variety of assessment strategies. [3]

Grade	SIP - %Yes	**Non-SIP - %Yes**	Difference
2	**92**	**100**	**-8**
4	**91**	**90**	**1**

9. CA activities are based on learning objectives. [4]

Grade	SIP - %Yes	**Non-SIP - %Yes**	Difference
2	**92**	**83**	**9**
4	**82**	**88**	**-6**

10. While assessing one group, Teacher monitors all groups during assessment activities. [8]

Grade	SIP - %Yes	**Non-SIP - %Yes**	Difference
2	**82**	**42**	**40**
4	**77**	**22**	**55**

11. Teacher uses a 'class list' to keep records of assessments for each learner in the group(s). [7]

Grade	SIP - %Yes	**Non-SIP - %Yes**	Difference
2	**58**	**50**	**8**
4	**75**	**60**	**15**

12. Teacher uses assessment from learners to change or adapt the lesson. [6]

Grade	SIP - %Yes	**Non-SIP - %Yes**	Difference
2	**50**	**42**	**8**
4	**39**	**40**	**-1**