

Improving Educational Quality (IEQ) Project

**PROUD PIONEERS: MALAWIAN TEACHERS
IMPLEMENT CONTINUOUS ASSESSMENT
IN PRIMARY SCHOOL CLASSROOMS**

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Acronyms

CA	Continuous Assessment
CAFS	Continuous Assessment Feasibility Study
IEQ	Improving Educational Quality
MANEB	Malawi National Examinations Board
MIE	Malawi Institute of Education
MIITEP	Malawi Integrated In-Service Teacher Education Programme
PEA	Primary Education Advisors
PECAR	Primary Education Curriculum Reform
TALULAR	Teaching and Learning Using Locally Available Resources
TST	Technical Support Team
TTC	Teacher Training College
USAID	United States Agency for International Development

Proud Pioneers: Malawian Teachers Implement Continuous Assessment in Primary School Classrooms

“...We feel respected and honored to be called pioneers of continuous assessment [for the] whole of Malawi and we are proud of this. Our promise is that we shall pioneer hard on this project to bring you the best outcomes of C.A. [continuous assessment].” — Teacher, Ntcheu District, Malawi 2002

In a context where continuous assessment usually means continuous testing (Schmidt, Miske, & Santhe, 2003), the 57 teachers participating in the Continuous Assessment Feasibility Study (CAFS) did indeed have to “pioneer hard” to develop a new way of doing continuous assessment. They had to learn new terms, new concepts, and new ways of teaching the average 66 pupils in their classes. They forged into the unknown territory of individual, curriculum-based assessment that set aside paper and pencil tests. They foraged for resources to develop their own assessment materials, and they ventured into the new terrain of incorporating remediation and enrichment into their lesson plans and teaching. Their rewards were improved pedagogy and pupil achievement; increasingly child-friendly classroom environments; and enhanced relationships with colleagues, head teachers, pupils, and their parents.

How did these pioneers go about making these changes and what enabled these changes to take place? This paper explores these questions by examining changes in the discourse and teaching practice of four of the 57 teachers who participated in the 12-month study.

Background

Longitudinal data collected in the early years of Malawi’s USAID-funded Improving Educational Quality (IEQ) project raised serious questions about teaching and learning in Standards 3 and 4 of government primary schools. A majority of pupils were unable to read, write, or perform simple mathematics tasks after spending several years in primary school; and teachers were unable to diagnose the reasons pupils were performing so poorly. Therefore, in 2001 IEQ team members began meeting with representatives of six educational organizations in Malawi to plan an intensive classroom-based intervention to improve teaching and learning. Motivated by concerns for pupil outcomes in literacy and numeracy and teachers’ ability to assess pupil learning, in January 2002 this group of education stakeholders¹ launched a Continuous Assessment Feasibility Study in 21 primary schools of Malawi’s Ntcheu district.

¹ Participating organizations included the Domasi College of Education, the Malawi Institute of Education (MIE), the Malawi National Examinations Board (MANEB), the Ministry of Education, the Ntcheu District Education Office, St. Joseph Teacher Training College, and Save the Children Federation-US.

The study sought to explore ways in which Standard 3 teachers could assess individual pupil learning in mathematics, English, and Chichewa. In this approach to continuous assessment, teachers use locally available materials such as banana bark to make learning materials that they can also use to assess pupil learning. Following individual assessment of pupils, teachers record pupil progress on a simple “rainbow” chart where the colors of the rainbow are assigned to literacy and numeracy skills of increasing complexity from the Standard 3 curriculum.

As pupils master a particular category of skill development and can demonstrate their mastery by performing a particular task, they move a happy-face marker with their name on it into the next color level on the chart in order to mark their progress. If pupils are not able to perform 18 out of 20 tasks correctly in a particular area, the teacher tells them to work with related manipulative learning materials in the classroom in order to increase their understanding, and they return later to be assessed in the same level. Teachers also record this in a notebook and, more importantly, they then use the assessment information to inform and improve their classroom instruction.

The IEQ team insisted that these features be included in the continuous assessment design:

- developing curriculum-based assessment activities in mathematics, Chichewa, and English;
- using simple recording and reporting procedures, and instructing teachers how to provide remediation and enrichment based on pupil performance;
- teaching teachers how to use local resources for teaching and learning; and
- engaging pupils in learning and reducing anxiety about assessment.²

Additional principles on which the feasibility study was based maintained that continuous assessment should:

- be relevant to the Malawi context of large class sizes, limited resources, and unskilled teachers;
- use a variety of authentic and performance-based assessments;
- involve analysis of pupil performance;
- give appropriate feedback to pupils and include reporting to parents and others;
- include increased parental and community involvement; and
- include self-assessment.

² For more information, see Chilora, H., du Plessis, J., Kamingira, Y., Mchazime, H., Miske, S., Phillips, A., and Zembeni, G. (2003). *Continuous Assessment for Standard 3: A Training Manual for Educators in Malawi*. Malawi Institute of Education and Improving Educational Quality Project: Domasi, Malawi.

Data Sources

QUALITATIVE DATA

Since IEQ team members from the US and Malawi wanted to explore the feasibility of introducing a new model of continuous assessment, this was designed as a feasibility study rather than a pilot study. As an exploratory study, qualitative methods were used to document the development of this new model of continuous assessment. Qualitative data included documents, observations, interview data, and videotapes of CAFS workshops. The specific kinds of data are listed below.

Documents: Initial teacher essays on continuous assessment; Technical Support Team³ (TST) final essays on “what I have learned”; pupil performance as documented on rainbow charts and in record books; workshop programs, quizzes, and handouts; IEQ Malawi reports; guidelines for school visits; copies of TST journals recording observations from school visits; teacher continuous assessment progress reports.

Observations: School and classroom observation data as recorded by TST members; classroom observations conducted by the author in January 2003.

Interview Data: Interviews with teachers, head teachers, and pupils using interview protocols; and occasional informal interviews with pupils to check on their skill levels.

Videotapes: Videotapes from the fourth residential training, January 2003, including tapes of teachers teaching in primary school classrooms and reports from the eight teaching groups on what they learned from the experience.

The four teachers were selected from among the group of teachers with the most complete data sets available (e.g., at least four sets of interview data, essays, observation notes, pupil data).

QUANTITATIVE DATA

Learning gains data in mathematics and English were collected for 10 Standard 3 pupils in 10 randomly selected CA schools out of the 21. Pupils were tested in February and October 2002. These data were compared with learning gains data collected from schools in the contiguous district of North Balaka participating in the larger Malawi IEQ study.

³ The Technical Support Team consisted of members of several of the organizations participating in the project, including the Domasi College of Education, the Malawi Institute of Education (MIE), Ntcheu District (Primary Education Advisors [PEAs]), and St. Joseph Teacher Training College.

Continuous Assessment Feasibility Study Outcomes

The outcomes of the Continuous Assessment Feasibility Study were impressive:

- (1) Pupils who were not literate coming into Standard 3 learned how to read and write, and their achievement in mathematics increased, as evidenced by quantitative and qualitative data.
 - A comparison between pupil scores in mathematics and English from Ntcheu CAFS schools and neighboring district North Balaka schools showed that CAFS schools performed similarly to or worse than North Balaka schools in February 2002. The October 2002 scores for the CAFS schools are significantly higher than the North Balaka schools. On none of the exams did the CA schools perform worse than the North Balaka schools at the end of the year (Winicki, 2003).
 - Pupils interviewed by TST members regularly stated that they liked school this year because they were learning to read, write, and do mathematics. At Kasinje School, a pupil reported that in the past she was unable to read and write but now she can.
 - TST members randomly asked pupils they interviewed to read for them or to perform a continuous assessment task. Pupils were able to perform as requested at their expected level indicated on the rainbow chart.
- (2) Teachers developed new skills and gained new knowledge. As a result, they are better teachers.
 - They know how to assess pupils, record the information, and use the results of the assessments to inform their teaching. Teachers who reported having difficulty in recording results or incorporating the assessment results into their teaching requested TST assistance and later reported success in completing these tasks.
 - Teachers have new instructional materials that they have made, and they know how to make additional materials at almost no cost. Teachers, pupils, parents, and head teachers reported their delight with these TALULAR⁴ materials. A number of teachers stated candidly that making their own materials is very time-consuming, but they are seeing enormous improvements in pupil learning in the classroom as they use these materials.
 - Teachers have a new vocabulary for talking about teaching and learning (e.g., “remediation,” “enrichment,” and “curriculum-based assessment”). “Assessment” no longer means “test” to CAFS teachers.

⁴ TALULAR is the acronym for “Teaching and Learning Using Locally Available Resources.” The term was coined by Andy Byer and has rapidly gained popularity in Malawi through the efforts of MIE IEQ team members Gibson Zembeni and Yoas Kamangira.

- Teachers collaborate and share work with their colleagues in making materials and talking about teaching and learning.
 - Teachers are sharing their new skills with other teachers who are expressing an interest in their work.
 - Teachers have become more assertive. At the first workshop they sat quietly and said little. By the fourth workshop they were publicly addressing plenary sessions, and questioning and challenging the instructors. This assertiveness empowers them to ask questions, clarify uncertainties, learn more, and gain increasing confidence.
- (3) A more child-friendly environment is replacing the environment of fear in the classroom, and pupils and teachers alike are pleased with the change.
- Children are not afraid of continuous assessment as they inevitably are of tests. Pupils say the teacher is good and friendly to them during assessment. Head teachers observe that children don't run away for assessments as they did for tests. One head teacher noted that teachers even give pupils a chair to sit on for the assessment. (This is significant in a country where most children sit on the floor.) Pupils at Chimatu School said they "like being assessed individually because the atmosphere is relaxed." All pupils interviewed there agree: "Learning is better than before because of teachers' friendly attitude."
 - Teachers have stopped yelling in the classroom. They have stopped "harassing" and hitting pupils, and a friendlier atmosphere pervades the classroom. Pupils interviewed at five of the 10 CAFS schools that participated in the learning gains study said they liked school this year because the teacher did not whip or beat them. A Sharpvale School transfer pupil said she likes this school because "Teachers don't whip us and they use [motivational] language even when we are not doing well."
 - Teachers help pupils focus on their schoolwork. An 11-year-old Kasinje School pupil said the teacher helps them a lot when they have difficulties in some of the concepts in English, Chichewa, or mathematics. Five of six other pupils interviewed said they like their school because their teachers "protect them against heavy manual work given to them by other staff members."
 - Pupils like school, like their teachers, and their attendance patterns reportedly are improving. Although TST members did not collect attendance data to verify this, teachers, head teachers, parents, and pupils regularly reported improved attendance.
- (4) Parents see evidence of improved pupil and teacher performance. They too are pleased, and they are demonstrating increased support for their children's teachers and schools.
- Parents observe that their children are learning how to read and write, and they commend the head teacher and teacher—sometimes publicly—for this.
 - Parents are supporting teachers by ensuring better pupil attendance.

- Parents provide teachers with resources to make learning materials, and with such practical things as doors for classrooms (e.g., Bawi School) so that teaching materials are protected.
- (5) Head teachers support the changes. Teachers and head teachers at several schools reported that relationships between head teachers and staff are improving.
- Head teachers store TALULAR materials in their office or help teachers find or acquire storage places.
 - Head teachers arrange meetings for parents to learn about continuous assessment, and request parents' support.
 - Head teachers have better relationships with their teachers, and teachers report improved relationships with their head teacher, too.

Does this list of accomplishments imply that a “silver bullet” at last has been found for improving educational quality in Malawi and other countries of sub-Saharan Africa? Regrettably not. This intervention in 21 schools faces myriad challenges before it can be expanded to the other schools of Ntcheu District, much less to the region and the nation. But the evidence is undeniable that something significant is going on in CAFS schools, which has important implications for primary education in the country. Stakeholders asserted that their commitment, pupil involvement, and particular elements of the structure and design of the CAFS contributed to its success.

Five Key Programmatic Elements Supporting Teacher Change

In the first session of the fourth and final workshop, teachers reflected on the model of continuous assessment as they had come to develop it in their classrooms during 2002. The reasons for success they cited included: (1) their own dedication and commitment as teachers; and (2) their pupils' new enthusiasm for learning as demonstrated by their willingness to work hard in class, their improved attendance, and their new interest in reading library books and other materials.

Teachers, head teachers, and TST members also repeatedly cited several elements of the design and structure of the program as key reasons for their change:

- (1) Four one-week residential workshops provided incremental training for teachers and head teachers. Instructors did not cram too much information into the sessions; they provided information teachers needed when they needed it.

- (2) Teachers were expected to work collaboratively with colleagues. All Standard 3 teachers from each school participated in the study, attended workshops together, and were expected to work together and support each other back in their schools.
- (3) Parents got involved in the curriculum through their support for TALULAR and their participation in parent meetings. After parents attended meetings and came to understand what was involved in the continuous assessment process, they readily collected resources so that teachers (and later, pupils) could make and store their own teaching and learning materials.
- (4) Regular supervisory visits and coaching from TST members was important. Two one-day visits per term from TST members gave CAFS teachers an opportunity to demonstrate what they had learned at the workshops, clarify what was unclear, and, if necessary, be reminded of what they still needed to accomplish.
- (5) TALULAR. Instructing teachers how to use local resources to make teaching and learning materials and instructing them in how to use the materials in various teaching methods (e.g., using flash cards with large classes and small groups) was essential to the success of the project.

Further elaboration on these five elements follows the presentation of the four teacher case studies below.

Case Studies of Four Teachers

CASE NUMBER 1

The CAFS process enables even untrained teachers to develop the necessary skills and materials to plan effective lessons that help pupils develop literacy and numeracy. Training in CA also provides teachers with the professional language they need to discuss effectively the teaching and learning process, and enables them to reflect with greater specificity on their teaching practice. Through the training teachers receive in classroom management, they learn new strategies so that they can change their behavior with their pupils, thus improving the classroom environment.

MR. CARTER OF MANJAWIRA SCHOOL

Manjawira School in Ntcheu District has 12 teachers for 994 pupils; eight of the 12 are unqualified. This includes the two Standard 3 teachers, both of whom are untrained.

Mr. Carter is one of the Standard 3 untrained teachers. He reports that he has 121 pupils in his Standard 3 class due to a shortage of teachers in the school. In May, when asked what he is doing well

in continuous assessment, Mr. Carter says he has made the necessary (rainbow) charts; he is assessing pupils; and he has figured out a strategy for class management so that “when I am assessing I have class leaders to keep the class busy.” He is also communicating with parents.

By July, Mr. Carter has progressed from making charts and conducting assessments to making teaching and learning materials and knowing how to use them. He gives as an example that when he teaches “most used” words, pupils can see them from the chart he has made. However, Mr. Carter notes that he is having problems taking continuous assessment information to his schemes of work. He is puzzled about how to integrate what he learns about pupils from the assessments into his lessons. The TST member visiting Manjawira School explained to Mr. Carter what to do, and further advised him how to record assessment information more effectively (i.e., to show the colors on the rainbow chart and to make smaller face cards to place on the rainbow chart in each subject to show the number of pupils in each level). The coaching by the TST member was successful; by September, when asked what he does well, Mr. Carter reports the following:

[I am] producing teaching and learning aids and using the aids appropriately, managing large classes, making continuous assessment records and making lesson schemes, encouraging pupils to learn, co-teaching with my fellow teacher, and using various strategies when teaching pupils.

The TST member who visited Mr. Carter’s class verified that he displayed and used his teaching and learning aids in a lesson. He also used group work to assist pupils in learning, and he had improved both his assessment records and teaching records. The TST member wrote: “schemes and records of work were available and well maintained.”

The Standard 3 teachers and head teacher at Manjawira are “very impressed with continuous assessment and the use of TALULAR.” The materials complement their teaching, they have learned to vary their teaching strategies to enhance learning, and this has made them understand that “pupils have individual differences and need to be treated differently according to their differences.”

This individual treatment of pupils paid high dividends for Mr. Carter. Already in May, his pupils said they could understand math concepts because daily work was preceded by adequately explained examples. By September, Mr. Carter reported that his pupils had “shown improvement in reading, writing, doing simple mathematics calculations, and using resources independently.” These were achievements that TST members were able to verify with individual pupils. By November, the rainbow chart revealed that pupils had reached different levels of achievement in the three subjects. Some pupils had reached the top level in each of the three subject areas, and nearly all pupils had moved on from the first two levels in English and mathematics.

Mr. Carter admitted that his relationship with his pupils also had changed. Pupils said that his approach was “good and friendly,” and they were free to express themselves during assessments. He was interested in their work, helped them make corrections, and was one of the teachers who protected them “against heavy manual work given to them by other staff members.” In July, Mr. Carter described a new relationship with his pupils. He had adopted a new classroom strategy regarding his “use of language in the classroom.” He said forthrightly, “I do not harass pupils any more.” The head teacher concurs that pupils’ reactions to the Standard 3 teachers and to continuous assessment are very good. He stated, “Previously when it was time for tests they used to run away, but now they are not afraid of continuous assessment—actually they are enjoying it.”

CASE NUMBER 2

By learning to implement the process of continuous assessment, a qualified teacher can take her or his pupils to new heights. Coaching from a supervisor or TST member can also be beneficial to an experienced teacher learning new strategies. When parents are included in new ventures such as CAFS, they can see that this professional development makes a difference in the teacher’s teaching and their children’s learning. Often they are eager to get involved; some even publicly recognize the teacher’s accomplishments.

MR. CHALAMBA OF NSIYALUDZU SCHOOL

In his January 2002 essay about continuous assessment, Mr. Chalamba wrote that “good handwriting skills, reading skills, and correct pronunciation of words” were the challenges he faced in teaching Standard 3. He listed his three assessment strategies as “oral questions; class exercises; and weekly, monthly, and end-of-term tests.” By the end of the year, Mr. Chalamba described his teaching and his pupils’ engagement in lessons in very different terms:

There were discussions in groups; pupils were interacting among themselves; pupils were able to ask the teacher questions. Gender bias was minimized. Pupils were thinking fast.

Good handwriting may still have been important to Mr. Chalamba, but pupils’ learning outcomes and participation had become a much higher priority. By September, Mr. Chalamba and his colleagues had made an array of assessment and teaching and learning materials that they exhibited in a TALULAR display room at the school. The author observed Mr. Chalamba use a poster he had made as he taught Chichewa to the class. All the children seated on the floor, from the back of the room to the front, had their eyes fixed on Mr. Chalamba and his poster, and participated readily when he called on them.

In May, Mr. Chalamba said he did not understand how to record student progress in the progress book, but with assistance from the TST he figured it out. In July and September, he reported he understood everything, and his record books confirmed that he did indeed understand.

By November 2002, all of Mr. Chalamba's 74 Standard 3 pupils had reached the top four levels in every subject. No child was still in one of the bottom two levels. In mathematics and Chichewa, over three-fourths of the pupils were in the top two levels. In English, nearly half the class was in the top two levels; the other half was in the middle two levels.

Mr. Chalamba uses the strategies he has learned through continuous assessment to ensure that his classroom is more inclusive and that instruction is appropriate to children who are of varying abilities. "Even the deaf pupil is doing well," he observed.

In September, Mr. Chalamba says that parents are "witnessing and acknowledging the positive impact of CA on their children." An IEQ team member describes how one particular parent at Nsiyaludzu School praised Mr. Chalamba in public at the Area National Day of Education celebration. The parent said:

Let Mr. Chalamba come here before I begin saying what I would like to say. My child went through Standards 1 and 2 but could not read by the end of Standard 2. He is now able to read because of Mr. Chalamba's commitment.

Mr. Chalamba walked to the front and acknowledged the thanks not only of the parent, but also of Standard 3 pupils, who also publicly thanked their teachers for the instruction they were receiving at Nsiyaludzu School.

CASE NUMBER 3

The CA process enables a qualified teacher to develop skills of remediation and enrichment, which enable her or him to understand individual differences in pupil learning, even in a large class. Teachers can also take advantage of the opportunity to share what they have learned with their colleagues, using their own new learning as an occasion for professional development for themselves and for their colleagues.

MS. BAMANI OF NSIYALUDZU SCHOOL, COLLEAGUE OF MR. CHALAMBA

Ms. Bamani, a qualified teacher from Nsiyaludzu, says that continuous assessment has helped her to identify slow learners and give them remedial work. It also has helped her to use a variety of strategies to enhance pupils' understanding of the lesson. At the end of the year she says she hopes to continue using CA in the class she is assigned to teach the following year because CA allows her "to know which pupils are fast learners and which one are slow learners." This in turn helps her to devise appropriate approaches for the different groups.

The strategies that Ms. Bamani uses with her 77 pupils include many TALULAR materials that she has made. In May, Ms. Bamani had made mats to use when teaching mathematics; in July, reading cards and mathematics charts; and by September she had made counters from beads, clay numbers, a clay alphabet, a number wheel, a cupboard, and a video box. In May, Ms. Bamani reported that the most difficult thing about CA is that it is time-consuming, especially when making teaching and learning materials and assessing pupils. Nevertheless, this time commitment has not deterred her from making TALULAR materials. “Many pupils learn what they see,” says Ms. Bamani, “so the learning/teaching aids have made them able to read and write.” Already by May most of her pupils were able to read and write. In addition, she notes that pupils are more creative, and “pupils are able to solve maths problems on their own.” In September, Ms. Bamani notes that children are interested in learning, and they are able to use locally available materials (e.g., a number tray) as well as make their own learning materials.

Ms. Bamani’s strategies are proving successful with her pupils, the majority of whom are in the top three levels of the rainbow chart in Chichewa, English, and mathematics. In mathematics, 96% of her 77 pupils are in the top level. Obviously they are well prepared to move on to new challenges in mathematics in Standard 4. In English more of her pupils cluster in the middle range of the rainbow chart. The majority are in levels three and four (out of six); eight pupils have reached the top level.

Ms. Bamani is helping other teachers learn to improve their teaching through the use of TALULAR; she also is teaching pupils to make their own learning materials. During a staff meeting she and her colleagues appraised the other teachers on continuous assessment, the development of teaching learning materials, and how to use continuous assessment for determining passes into Standard 4. Ms. Bamani reports that a few teachers have started using new strategies of teaching the languages and use of TALULAR to supplement the teaching.

CASE NUMBER 4

The CA process allows and encourages teachers to improve their teaching progressively throughout the year. This includes skills in classroom management as well as pedagogy in literacy and numeracy. Standard 3 CAFS teachers have between 41 and 119 pupils in their classes, and managing these large classes is an ongoing challenge. Figuring out teaching strategies that work with large classes, and helping pupils take greater responsibility for their own learning, are among the lessons that these pioneer teachers contributed to understanding the feasibility of implementing this CA model in Malawi.

MR. KABI OF MLANDA

Mlanda School has 262 pupils in Standard 3. The Mlanda School deputy head teacher notes that Standard 3 CAFS teachers show commitment and dedication to their work; their competence has

improved tremendously. “The three teachers are on a competition to take many pupils to higher levels” he adds.

Mr. Kabi, one of the Standard 3 teachers, has over 80 pupils in his class. Mr. Kabi reported in May to the TST that he was doing well in the basics: assessing pupils, keeping assessment records, and using TALULAR materials. One month later, Mr. Kabi reported that he had improved his teaching, and was using a variety of teaching methods, such as group work and question-pause-and-answer. He also was using a variety of teaching and learning materials from his stock (e.g., containers of various sizes in mathematics).

In May, Mr. Kabi reported that the most difficult thing in continuous assessment was managing a large class and giving remediation, especially when some pupils are absent. By June, he expressed confidence that he was managing his class well. His management strategies included: conducting assessment every Thursday and giving pupils special work on that day; sometimes assigning another teacher or head teacher to help control his pupils; having enough cards (learning materials) to keep the class busy; and having fast learners work with slow learners to do their activities while he is off conducting individual assessments. During the year, Mr. Kabi routinely expressed concern for pupils who are absent frequently. By the end of the year, he proudly reported that his pupils were no longer afraid of him in class and that as a result absenteeism had been reduced considerably. Parents were supporting him by making sure that their children were not absent from school without a just cause. The major difficulty that he faced was on market days, when some pupils would go to the market at Lizulu and not come to school.

In addition to trying out varied teaching methods, making sufficient teaching and learning materials, and conducting systematic assessment, Mr. Kabi offered extra teaching sessions for his class, especially to those children who have some problems. As a result, by the end of the year his pupils were able not only to read and write but also to assist fellow learners. He observed that this helped the majority of learners in his class to improve their literacy and numeracy skills.

The head teacher at Mr. Kabi’s school boasts:

There is a competition among the Standard 3 teachers in creativity. The three teachers are coordinated in teaching so that the three classes are moving together. The teachers share ideas and they are more responsible than they were before the introduction of CA. They are able to identify areas which need improvement.

The deputy head teacher added that in Standard 3 “learning has improved. The present Standard 3 pupils have already gained the skills of reading and writing before going to Standard 4--and while in term 2 for that matter.”

In September, a TST member observed Mr. Kabi teach a well-prepared mathematics lesson plan with clear specific objectives. The TST member wrote:

The introduction of the lesson was lively and linked to the subject matter. The TALULAR materials used were clock faces, which were correctly used. He used group work, which allowed pupils to participate fully in the lesson. He used other pupils to correct those who gave wrong answers. Mr. Kabi gave written exercises and went round checking the pupils' work. The class was well controlled. Mr. Kabi had good schemes of work whose [sic] records were updated.

Mr. Kabi's pupils said that they felt happy about being assessed. They "want to pass [the assessment] and then improve their intelligence." Pupils interviewed at random said they like school because they know how to read and write, the teacher doesn't whip them, and they admire the teacher.

Evidence for the Five Key Elements Supporting Teacher Change

The cases above reveal the ways in which the discourse and teaching practice of these four pioneer teachers changed dramatically over the course of the year. Different aspects of these individual cases illustrate how the five key programmatic elements facilitated these changes or supported them as they changed their discourse and their practice.

- (1) Workshops: Teachers reported that their one-week residential workshops provided incremental training, giving them the information they needed when they needed it.

Ms. Bamani was so convinced of the value of continuous assessment, remediation, and enrichment in her teaching that she declared she wanted to continue using CA in whichever class she was assigned the following year. Ms. Bamani and all the other CAFS Standard 3 teachers from Ntcheu learned virtually everything they knew about continuous assessment by attending the four one-week CAFS workshops at the Malawi Institute of Education. The teachers learned about remediation and enrichment the second day of the first workshop, pioneered the strategies in their classrooms, and by the end of the year they were completely persuaded of the value of CA.

The four one-week workshops were held in January, April, and August of 2002, and in January 2003. The first residential training workshop followed this logical progression of topics:

Day 1: IEQ team members introduced workshop content with these topics: "What is continuous assessment (CA)?" "What are the reasons for using it?" and "What are the characteristics of good CA?" At the first workshop, TST members explained how to conduct CA in one subject only—mathematics for Standard 3. This was immediately followed by how

to make mathematics assessment materials and how to make mathematics record books, after which teachers produced their own mathematics assessment materials.

Day 2: Teachers demonstrated how to use the mathematics materials they had made the previous day. Then they learned how to record mathematics assessment results, analyze pupil assessment results, and assign appropriate remediation and enrichment activities related to mathematics assessment and instruction.

Day 3: IEQ instructors introduced “Classroom Management,” or what to do with 65 other pupils while the teacher is assessing one. Other topics included pupil self-assessment and making pupil self-assessment charts.

Day 4: Workshop participants prepared and presented micro-teaching mathematics assessment lessons, followed by an assessment of their presentations. Other topics included the role of principals and PEAs, and expectations for school visits.

Day 5: Final assessment and discussion.

At the beginning of the fourth residential training workshop, teachers gathered into school-based groups to reflect on the successes and failures of the 2002 study. Afterward they discussed what the contribution of CA results might be to pupil progress and promotion. (Since CA is used more frequently than paper-and-pencil tests in CAFS schools, whether and how to use CA performance results for promoting pupils to the next standard was an important question.) On the third day, teachers divided into subject-based groups to prepare lessons on particular topics in mathematics, English, or Chichewa that they would teach the following day to a group of pupils at a local school. TST members selected lesson topics intentionally. For example, they had observed on their visits to CAFS schools that teachers had difficulty teaching the concepts of “carrying” in addition and “borrowing” in subtraction, so they asked teachers to prepare a lesson in the latter topic that they could critique together following the instruction. This teaching was followed by a group critique of the lesson, and later each lesson critique was presented to the entire group.

The incremental training that one CAFS teacher had noted was critical to the design of the workshop is well illustrated in the first day’s activities of the first workshop. How to conduct an assessment was followed by a demonstration of how to make the assessment materials and books in which to record the assessments. Immediately following these sessions, participants made their own materials and demonstrated to their colleagues how they would use the materials. The participatory nature of the workshop, and the importance placed on collaboration with the IEQ team, were also key ingredients of the workshop’s success. At the first workshop, IEQ team

members invited teachers to pioneer this effort for the entire country, and the workshop design quickly propelled them into that work.

As one CAFS teacher noted, the IEQ team provided them with the information they needed when they needed it. The structure of the workshop also elicited information from the teachers, and invited them to wrestle with issues such as how to use CA results in pupil promotion. In doing this, they came to understand that they possessed the information needed to make these decisions; they were becoming the experts.

- (2) Collaboration. Teachers worked collaboratively with colleagues. All Standard 3 teachers from each of the 21 schools attended workshops together and were expected to work together and support each other in their schools.

The decision to invite all Standard 3 teachers from each of the CAFS schools to participate in the study meant that they were able to build collegial relationships at the workshop and then go home and “pioneer hard” together. Teachers spoke of the ways in which they worked with their colleagues. Head teachers regularly observed that teachers did indeed support each other and work together. The Mlanda School head teacher noted that the three Standard 3 teachers had “coordinated their teaching so that the three classes are moving together. The teachers share ideas and they are more responsible than they were before the introduction of CA.” Both the head teacher and deputy head teacher at Mlanda spoke of a kind of “competition in creativity” among the teachers.

Teachers not only collaborated with each other, they were quite willing to share what they were learning about CA with other teachers in their schools. For example, during a staff meeting at Nsiyaludzu School, Ms. Bamani, Mr. Chalamba, and the third Standard 3 teacher “appraised the other teachers” on continuous assessment, how to use it for determining passes into Standard 4, and how to make their own teaching and learning materials. Ms. Bamani mentioned more than once that she also helped other teachers learn to improve their own teaching through the use of TALULAR, and she noted that a few of them had begun using language teaching methods in particular.

This aspect of the CAFS was so successful, that in the final workshop, the IEQ team included a session for Standard 3 teachers and head teachers from each school to develop an action plan for offering school-based in-service training on continuous assessment to all teachers in their school.

- (3) Parent involvement. Parents got involved in the continuous assessment process through their participation in parent meetings and their support for TALULAR.

Schools actively sought to inform parents about continuous assessment in the classroom. One school held an “Open School Day” to which they invited parents and other members of the community. At this meeting, and at PTA and parent meetings at other schools, teachers and pupils gave a demonstration of how teachers used TALULAR materials to assess pupil progress in the three subject areas. Parents came to understand (or at least were exposed to) what pupils were expected to learn and what teachers were trying to do in the curriculum and in the classroom. After attending these meetings, parents were willing and eager to support teachers in various ways. Parents of Mr. Kabi’s pupils saw to it that their children were absent from school less frequently. At another school, parents provided school reports (report cards) for teachers to fill out for their children at the end of the year so that they could have a permanent record of their children’s progress. (These reports are expensive, so parents do not always receive formal written end-of-year reports.) Parents at other schools readily collected locally available resources so that teachers—and later, their own children—could make teaching and learning materials. Bawi School parents gathered the necessary resources to provide the school with doors so that TALULAR materials could be safely stored in classrooms. Parents came to understand what was involved in the continuous assessment process, and they enthusiastically supported the improvement of educational quality for their children. In the case of Mr. Chalamba, this enthusiastic support translated into public recognition by a grateful parent in front of the entire school community.

- (4) Supervision. Regular visits and coaching from TST members enabled teachers to make changes in their teaching practice.

TST members were assigned to visit CAFS teachers two days per term. Teachers not only appreciated the attention, but as the cases of Mr. Carter and Mr. Kabi illustrate, conversations with TST members were important to teachers’ professional development. At Manjawira School, Mr. Carter learned how to incorporate assessment results into his schemes of work and lesson planning, something with which he was having trouble as an untrained teacher. By the end of the year, he confidently reported that this was one of the aspects of CA that he was doing well.

Although he was an experienced teacher, Mr. Chalamba at Nsiyaludzu School was not certain how to keep accurate reports of CA results. On a visit to Nsiyaludzu School the TST member explained the process to Mr. Chalamba in detail (i.e., “show the colors on the rainbow chart and make smaller face cards to place on the rainbow chart in each subject to show the number of pupils in each level”). In subsequent visits, TST members noted that Mr. Chalamba was managing this well.

These regular visits also gave TST members opportunities to observe for themselves difficulties some teachers were facing. During second- and third-term school visits, TST members observed that a number of teachers were having difficulty teaching the concepts of “carrying” in addition

and “borrowing” in subtraction. TST members carried this information back to the IEQ team, and together they decided to address these concepts in the subsequent residential workshop.

- (5) TALULAR. Instructing teachers how to use local resources to make teaching and learning materials was essential to the success of the project.

When designing the CAFS, the IEQ team insisted that they would not provide teaching and learning materials to place in teachers’ hands; rather, they would ensure that teachers would know how to make their own materials with resources that were readily available and inexpensive (duPlessis, 2003). Teachers were quickly convinced of the value of TALULAR. Mrs. Bamani believed that the learning materials promoted literacy. She observed that since many pupils learn what they see, “the learning and teaching aids have made them able to read and write.” She also credited the materials with pupils showing more creativity, and learning to solve mathematics problems on their own.

At the end of the year, Ms. Bamani notes that children are interested in learning, and they are able to use locally available materials (e.g., a number tray) as well as make their own learning materials.

TALULAR was a practical dimension of CAFS that met the very immediate need of teachers to have teaching and learning resources. TALULAR involves all stakeholders—teachers, pupils, parents, and head teachers. In this process, teachers decide which teaching materials they need (e.g., flashcards or posters), then they ask pupils and their parents to help them obtain the resources they need (e.g., cardboard, matchboxes, banana bark) to make these materials. Since resources come from locally available resources (i.e., trash), even the poorest family can find something to contribute and thus participate in their children’s education. TALULAR is not a privileged commodity; it is something around which all stakeholders can rally.

A place is needed to store the materials, so head teachers were enlisted to provide storage areas. In several schools, TALULAR materials were stored in head teachers’ offices. In another school, materials were stored in the school cluster display room. In yet another school, parents helped provide solid wooden doors for classrooms so that the materials could be locked up.

The word “TALULAR” became as much a part of CAFS teachers’ vocabulary as “remediation” and “enrichment.” Sharing TALULAR ideas became an important part of professional development. After they had learned to make something, teachers in turn taught their colleagues and their pupils how to make these materials. Spreading the TALULAR concept is an important legacy of CAFS to all schools of the district that perpetually face serious resource constraints.

Future Challenges

Examining the changing discourse and practice of four teachers and the five key programmatic elements they identified that supported these changes is an important starting point for considering how to improve educational quality on a larger scale. Several major challenges for extending and expanding continuous assessment remain.

- (1) It is critical to view the successes of the CAFS in the context of the demand and the reality of working in basic education in Malawi today: HIV/AIDS has lowered the average life expectancy in Malawi. The effects of the pandemic on the teaching force (Harris & Schubert, 2001) combined with other causes of mortality are widely known. Four of the 57 participating teachers died during the year of the study; these teachers had to be replaced with new, untrained teachers. Also the implications of the pandemic on children, especially girls, need to be addressed, since girls' absence and dropout rates are higher because they frequently are called on to be caregivers for ill family members.

When discussing pupil absences, dropout, or lack of success in CA with teachers, teachers regularly mentioned hunger or lack of food. If children are hungry, they perform poorly or do not attend school at all. Exploring the expansion of feeding programs for hungry children is another dimension of quality education that cannot be ignored or separated from issues of assessment.

- (2) “Gender-ing” continuous assessment is needed. IEQ learning gains and longitudinal studies show that boys usually outperform girls on learning gains measures across schools, including CAFS schools (Jesse, Winicki, Mchazime, Kamangera, Dowd, Harris, and Heyman, 2003). Mr. Chalamba says that CA is helping him to deal with gender bias in the classroom. Why does he say this and how can his observation and insights be shared with others? What other examples of gender bias exist across the program: (a) for the girls in school (and out of school), and for the boys; (b) for the women in the program—teachers, PEAs, TST members, and IEQ team members—in the organization of the program? How will gender inequities be addressed in the expansion phase, if there is one?
- (3) Taking this CA model to scale—to other Standard 3 classes, to lower and upper standards, to system-wide teacher INSET, and into MIITEP teacher training—require reflection and systematic planning. What are the implications for resources needed to do this? What ideas about assessment in the culture of primary education need to be addressed? (See Schmidt, Miske, and Santhe, 2003, for a discussion of these issues.)
- (4) What are the implications of expansion for teacher empowerment? Can every teacher be a pioneer? IEQ team members were aware of the possibility of the “Hawthorne effect” influencing

some of the outcomes of this study. Will teachers taught by other teachers and observed by their peers, PEAs, and head teachers be as motivated to succeed and improve as these 57 teachers? Perhaps this collegial, collaborative model could begin the next phase of expanding continuous assessment. With the need to improve so many aspects of educational quality in Malawi for so many children, many pioneers are needed.

- (5) A more careful or in-depth analysis of some of the CAFS findings could provide useful information for curriculum reform and teacher training in Malawi. For example, the rainbow charts revealed that pupils' achievements in English were lower than in the other two subjects across schools and in classrooms of both trained and untrained teachers. Why is this occurring? As has been discussed at length elsewhere, this may suggest that the teaching of English needs additional attention. Or it might suggest that the assessment questions need to be reconsidered and reorganized (e.g., lower the English skills a notch in the rainbow chart hierarchy). One teacher suggested that more sophisticated language skills were expected of pupils at the lower levels of English than at corresponding levels of Chichewa (e.g., orange and red). Since English was pupils' second language, the opposite would be expected. Probing the CAFS data could help to answer why pupils are not performing as well in English and how this might be addressed.
- (6) Teachers' concerns about continuous assessment enumerated in their discussion of "failures and reasons for the failures" in their final workshop reports, need to be addressed (e.g., streamlining implementation of CA in large classes). Stakeholders can anticipate that the initial answers will lie in the collective "wisdom of practice" that these pioneers of continuous assessment developed as they participated in the Continuous Assessment Feasibility Study in 2002.

Upon completion of the CAFS and the broader IEQ project, the IEQ/Malawi team sponsored a seminar for national level policy makers. When one panel began to describe what had been learned from the feasibility study, it quickly became clear that the policy makers already were aware of the successes of the study (Schubert, 2003). They stated that they were eager to begin incorporating the concepts of CA and lessons learned from the CAFS into Malawi's teacher training program and the curriculum of the Teacher Training Colleges (TTCs).

This high level of interest and commitment to reform using CA demonstrate that a successful intervention, one connected to the system through various actors, can be tried and diffused throughout the system without first being taken to scale in its existing form. This may dispel the notion that if a project is not first subjected to the rigors of an experimental design pilot study, it cannot be taken to scale and is not worthwhile. Continuous assessment is moving from a locally developed initiative to system-level potential. The Malawi National Examinations Board (MANEB) views the implementation of CA as an important development, with the potential to accelerate pupils' pace of learning and, thus, to increase the percentage of children going through the system at the appropriate ages. MANEB views CA as compatible, not competitive, with their testing genre. The Primary

Education Curriculum Reform (PECAR) group is interested in incorporating CA into national curriculum reform efforts. Hence, “going to scale” means here that the experience of the CAFS is being integrated into various areas (e.g., teacher training, MANEB, and curriculum). The remaining question is how, not whether, it will be integrated into the system and affect reform efforts.

Through St. Joseph’s Teacher Training College and the Domasi College of Education, as well as through the MIE, teacher educators participated in the development of this model of continuous assessment. They will continue to integrate CA into teacher development and curriculum reform. All the materials—manuals, articles, and TALULAR materials—are being shared with the TTCs and with PECAR. Integrating CA into the lexicon, design, and structure of the teacher training and primary education curricula are the next step. Although many challenges lie ahead, continuous assessment in Malawi is now well on its way to being integrated into the education system.

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