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WHITE PAPER SERIES

Centers for Excellence in Teacher Training (CETT) Program

Paper Four: Paradigm Shift

FINAL REPORT

January 2011

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CETT WHITE PAPER SERIES

This document is one in a series of white papers discussing the implementation and outcomes of the Centers for Excellence in Teacher Training (CETT) program. The CETT program was implemented by USAID's Bureau for Latin America and the Caribbean, Office of Regional Sustainable Development, Education and Human Resources Team from 2002–2009. CETT was based on a Presidential Initiative derived from commitments made by the U.S. Government at the Summit of the Americas in 2001 and operated in twenty-one countries in the regions of Central and South America, as well as the Caribbean.

The purpose of this CETT white paper series is to highlight the legacy of the initiative and to provide future program designers with some of the most important lessons learned and best practices developed within the long-term implementation of the CETT program.

The CETT white paper series includes five publications by theme:

Paper One: Regional Nature

This white paper discusses the challenges, successes, and lessons learned implementing a regional model for teacher training. The regional nature of CETT differentiated this program from other, strictly national, teacher professional development efforts undertaken by USAID. Three CETTs in the Caribbean, Central and South America underwent a significant process of compromise and cooperation to arrive at their regional models and this paper documents the initiatives taken.

Paper Two: Testing and Assessment

This white paper discusses the challenges and lessons learned in the process of creating a cross-country testing initiative. The three CETTs carried out testing initiatives to track student performance toward literacy benchmarks, with the goal of showing valid and reliable results. An extremely challenging endeavor, student assessment is further complicated when using tests across countries.

Paper Three: Sustainability

This white paper discusses the lessons learned while anticipating the challenges of sustaining the CETT program after the end of USAID funding. The CETTs worked closely with USAID to prepare for the continuation of the program at the regional, national, and local levels. The paper examines the political, financial, institutional, and social sustainability dimensions of these efforts.

Paper Four: Paradigm Shift

This white paper discusses the systemic change in the behaviors and attitudes of CETT stakeholder groups, including school administrators, teacher trainers, teachers, parents, and students. CETT's teacher training model stressed the inclusion of stakeholders at all levels to promote the importance of reading and writing. Achievement of the program's intended effects depended on the willingness of the institutions and individuals involved to change their behaviors. This paper highlights the lessons learned and best practices in promoting this change.

Paper Five: Cost Effectiveness

This white paper presents a cost-effectiveness study linking financial inputs and CETT program outcomes. The CETT model of teacher training developed differently in each of the three regions and this white paper analyzes the history of costs over time, cost-effectiveness based on teacher and student performance, and the limitations of comparing costs across countries and programs.

WHITE PAPER SERIES

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Paper Four: Paradigm Shift

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The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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Acronyms

CA-RD	Centroamérica – Republica Dominicana
CARICOM	Caribbean Community
C-CETT	Caribbean CETT
CETT	Centers for Excellence in Teacher Training
ICT	Information and Communication Technology
JBTE	Joint Board of Teacher Education
LAC	Latin America and the Caribbean
MOE	Ministry of Education
MOU	Memorandum of Understanding
PIU	Project Implementation Unit
RICETT	CETT CA-RD Inter-institutional Network
UPCH	Universidad Peruana Cayetano Heredia
USAID	U.S. Agency for International Development

Introduction and Methodology

The Centers for Excellence in Teacher Training (CETT) program was a Presidential Initiative to improve the pedagogical skills of teachers in the first, second, and third grades in economically disadvantaged communities of Latin America and the Caribbean (LAC). The hemisphere-wide program—announced in 2001 and implemented by the U.S. Agency for International Development (USAID)—created three regional¹ CETTs that began implementation in 13 countries, referred to in this study as:

1. C-CETT (beginning in the Caribbean countries of Jamaica, St. Vincent and the Grenadines, St. Lucia, Guyana, and Belize);²
2. Centro Andino (Ecuador, Peru, and Bolivia in South America); and
3. CETT CA-RD (in the Central American countries of El Salvador, Guatemala, Honduras, and Nicaragua; and in the Dominican Republic).

The Cooperative Agreements for USAID assistance to the CETT program ended in December 2009 after over seven years of technical support. (Two CETTs were issued a no-cost extension until early 2010.) As a result of the program, 35,095 teachers and administrators received training in interactive methods of literacy instruction. The program reached over 799,000 students in 21 countries.

CETT provided in-service training to teachers and administrators located in disadvantaged rural and urban areas that did not benefit from other donor programming. The program promoted the development of skills and adoption of active-learning strategies for teaching reading by aligning existing pedagogical practice with research-based best practices. The program had five core components:

1. **Teacher training** in effective reading methodologies and classroom management techniques
2. **Materials** for teachers to use to improve their reading instruction
3. **Diagnostic tools** to enable teachers to identify and address students' weaknesses and needs
4. **Applied research** to ensure the efficacy of the training, tools, and materials provided
5. **Information and communications technologies (ICTs)** to broaden access to the program

In addition, the CETTs also focused on sustainability efforts to ensure continuance of the program after the end of USAID funding. Within the parameters of these components, each CETT had the flexibility to manage and implement the program based on its regional context and needs. As a result, the CETTs developed with slight differences in each region.

CETT training *content* was related to seven literacy skills: reading comprehension, phonological awareness, phonics, fluency, oral expression, written expression, and vocabulary. Knowledge of these skills provided the foundation for integrated and effective reading instruction.

¹ In this study, “regional” refers to one of the three CETT areas: the Caribbean, South America, or Central America and the Dominican Republic. “Hemispheric” refers to all three CETTs as a single unit.

² By the end of the program in 2009, many more islands in the Caribbean had adopted CETT. Jamaica, St. Lucia, St. Vincent and the Grenadines, Belize, Guyana, and the Commonwealth of Dominica implemented CETT with USAID funding. After learning of the experiences and results of other countries, the governments of Trinidad and Tobago and Grenada approached C-CETT to join, fully financing their own implementation and purchasing C-CETT’s technical support. In 2009, five additional countries signed Memoranda of Understanding (MOUs) to expand CETT implementation to St. Kitts and Nevis, Antigua and Barbuda, Anguilla, Montserrat, and the British Virgin Islands.

The CETT teacher training model introduced innovative *techniques* such as continuous teacher training throughout the school year and follow-up support in the classroom. Teacher trainers visited CETT classrooms where they observed teachers and provided feedback and recommendations. Teacher circles gave teachers the opportunity to share their experiences with peers. Each CETT also emphasized the role of parents and the greater community in embracing a “culture of literacy” to support the importance of reading in the early grades.

The program was implemented in two phases: Phase One (2002–2006) and Phase Two (2006–2009). Phase One launched the initial CETT program design and development. Lead implementing institutions in Jamaica, Honduras, and Peru signed Cooperative Agreements with USAID. Phase Two supported a continuation of the CETTs following USAID’s emergent consensus that five years were not sufficient to fully implement the program and achieve the desired results.

Purpose

The purpose of this white paper is to examine stakeholder reports to determine whether CETT’s key stakeholders experienced a paradigm shift in their understandings and practices related to the instruction of reading and writing in grades one to three. For the purposes of this white paper, the definition of paradigm shift is a systemic change in behaviors and attitudes. Evidence of a paradigm shift is a reported change in key stakeholders’ attitudes and behaviors as a result of participation in the CETT program. Key stakeholders are the direct and indirect beneficiaries of the CETT program. In particular, the research team focused on seven groups of stakeholders, divided into beneficiaries at the school level and at the institution level.

Findings regarding each of the following key stakeholder groups are included in the study:

1. School Level
 - Principals
 - Teachers
 - Parents
 - Students
2. Institution Level³
 - CETT staff (including CETT executive directors, national and regional coordinators)
 - Training coordinators
 - Teacher trainers

Concept of Paradigm Shift

The concept of a paradigm shift was first discussed approximately four decades ago in Thomas Kuhn’s book *The Structure of Scientific Revolutions*.⁴ Kuhn defined paradigm shifts as “universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners.” Scholars and practitioners in the social sciences adopted Kuhn’s definition and it has since been applied to international development assistance. In their report entitled *The New*

³ For the purpose of this paper, individuals who *trained teacher trainers* in CETT practices are called “training coordinators” and individuals who *trained teachers* are called “teacher trainers.” The terminology actually used differed from region to region. In the Caribbean, those who trained teachers were called reading specialists, and those who trained the specialists were called teacher trainers.

⁴ Kuhn, T. (1970). *The Structure of Scientific Revolutions*. Chicago, IL: University of Chicago Press.

Development Paradigm, Turid Sato and William E. Smith discussed three conditions that can bring about a new paradigm in development initiatives.⁵ Defining paradigm shift as it relates to the CETT program begins with Sato's and Smith's concept of these three conditions:

1. Change in attitudes through learning
2. Working together (donor and stakeholder) with the help of facilitative processes
3. Involving stakeholders in improving their own lives and their own environment

This white paper focuses on the first and third conditions. The CETT teacher training model was, by design, a learning model—the research team examined whether this model could bring about attitude and behavior change through learning. The research team also examined whether participating stakeholders were involved in improving their own lives and environments, as indicated by their self-reflections on personal change and growth.

Hypothesis and Research Questions

The research hypothesis of this white paper is that, as a result of participation in the CETT program, key stakeholders experienced a paradigm shift (a systematic change in their behaviors and attitudes) with regard to their teaching and conceptual understanding of reading and writing. We also hypothesized that shifts needed to occur in each stakeholder group to bring about a larger paradigm shift. The team drafted five research questions to examine this hypothesis further:

1. How did the functioning of the CETTs and the perceived outcomes associated with them contribute to a paradigm shift among the key stakeholders of the program?
2. In what ways did CETT teacher training models contribute to changes in the attitudes and behaviors among teacher trainers and teachers? What were the most- and least-supportive elements?
3. What institutional characteristics, in schools, communities, or other relevant institutions supported or inhibited a paradigm shift? How did the attitudes and behaviors of school principals contribute to changes?
4. Did parents shift their paradigms as well? If so, what was the effect of CETT on parents' attitudes and behaviors in relation to the education of their children?
5. Did paradigm shifts occur in the teaching of reading and writing, and in assessment of student learning as perceived by key stakeholders?

The research team drafted these questions with all of the stakeholder groups in mind and the intention of gathering information from multiple sources. For example, the information for Question 4 came from parents and from the teacher trainers, teachers, and principals who provided their own views of changes they observed among parents. The specific methodologies used are described in the next section.

⁵ Sato, T. & Smith, W.E. (1993). *The New Development Paradigm: Organizing for Implementation*. Presented at the Organizing for Development, an International Institute (ODII) Workshop on the New Development Paradigm, September 1993.

Methodology

Sample Selection

The research team piloted the stakeholder instruments in Honduras (CETT CA-RD) and samples were taken in two countries from each CETT region.

1. C-CETT (Caribbean)
 - Jamaica
 - St. Vincent and the Grenadines
2. CETT CA-RD (Central America and the Dominican Republic)
 - Guatemala
 - Nicaragua
3. Centro Andino (Andes region in South America)
 - Bolivia
 - Peru

The sample for this study was chosen in a purposive manner. The sites of the lead implementing institutions (Jamaica, Honduras, and Peru) were included because these countries housed the CETT administration and executive director. The rest of the countries were chosen based on their location, length of exposure to CETT, ease of access, or the feasibility of combining travel for this white paper with travel required for some of the other white papers being conducted. In C-CETT, the research team initially chose Belize, but because no country staff was available to host the study, St. Vincent and the Grenadines replaced Belize.

Instruments

The research team drafted interview and focus group protocols for each of the key stakeholder groups and used these two types of instruments to collect qualitative data on participants' responses to the study's research questions. Because they were the only representatives in their respective countries, most institution-level stakeholders, including CETT staff and training coordinators, were interviewed individually. In countries where several teacher trainers were available at one time, the research team used the interview protocol in a focus group setting. Identical interview guides were used for both teacher trainers and training coordinators, with specific questions highlighted for coordinators. The interview questions for CETT executive directors and national or regional coordinators were identical as well.

Data Collection

In the initial data collection plan, members of the research study team were to travel to each country where they would be accompanied by an in-country consultant. In practice, this arrangement functioned better in some countries than in others. In some instances, CETT staff arranged all of the data collection and an in-country consultant was not necessary. In others, the in-country consultant not only arranged the focus groups and in-depth interviews, but also moderated the discussions or took notes.

The data collection plan specified that research teams were to collect at least one sample from each of the six stakeholder groups, *excluding students*, in each country. The plan also specified the methodology to be used for each group:

- In-depth Interviews
 - CETT staff (executive director, national or regional coordinator)

- Training coordinator
- Teacher trainer
- Focus Groups
 - Principals
 - Teachers
 - Parents

Although the research team did not directly interview students for the research study because of concerns about the feasibility of obtaining parental consent, it indirectly collected data about students from the reports of other key stakeholders. Research team members or in-country consultants facilitated all interviews and focus groups. More data was collected than originally expected. These results are summarized in the table below.

Final Data Collected				
In-Depth Interviews			Focus Groups	
CETT staff	CETT executive director ⁶	4	Teacher trainer	4
	CETT regional coordinator	2	Principal	6
	CETT national coordinator	4	Teacher	8
	Other	1	Parent	8
Training staff	Training coordinator	5		
	Teacher trainer	8		
	ICT Teacher trainer	2		
Principal of Teacher Training College		3		
Principal		2		
Teacher		2		
<i>Subtotal</i>		33		26
Total Interviews and Focus Groups: 59				

The research team systematically reviewed and analyzed all qualitative data. Whenever possible, triangulation was used to compare data from various sources. Since questions were asked about other stakeholder groups, the research team was able to gain a diverse perspective of personal opinions and perceived changes.

Limitations of the Research Study

The research team identified several limitations of the qualitative research study. Some of the limitations, such as the decision not to collect student data, had been known from the outset of the research. Other limitations became apparent during the data collection process. Though the research team worked hard to overcome the challenges that arose, it is important to note that some of these limitations do affect the findings and results.

- This qualitative study was based on information taken only from respondents who agreed to take part in the interviews and focus groups. These results were not based on a random sample

⁶ The research team interviewed two Executive Directors from the Caribbean (one a director at the time of the interview and one former director) and one Executive Director each from CETT CA-RD and Centro Andino.

and by definition cannot be considered statistically representative. An example illustrates this inherent limitation. Since the CETT program had already ended in many countries, it is possible that the stakeholders who responded to the research team's requests to take part in interviews and focus groups had been the most involved with the program. It is also possible that they over-represented a view that the CETT program had made the most impact.

- In countries where the CETT staff helped the research team gain access to schools and stakeholder groups, it is possible that some groups more favorable to CETT were unintentionally chosen to participate. Since the support of the CETT staff was essential in certain locations, this potential bias was an inevitable side effect of having focus groups arranged efficiently, on time, and on the schedule required by the research team.
- In at least three countries the research team met parents who did not know that their children had been involved in a special program and were not familiar with the program name. This possibility had not been anticipated and the team had not specified that knowledge of the CETT program was a prerequisite for participation. Absent that requirement, not all parents were equally adept at expressing how participation in the CETT program had contributed to changes in their child's literacy instruction or learning.
- The findings of the study can only be attributed to the countries and groups that participated in the study. It is also important to emphasize the corollary, that the findings of this study cannot be attributed to the CETT program as a whole, to each CETT region, or to all CETT stakeholders. Though the research team made every effort to reach out to various groups and individuals, this study's findings were not a census and provide only a snapshot of select participant opinions.

Reading Instruction before CETT

To understand whether a paradigm shift took place among key stakeholders as a result of the CETT program, it is necessary to examine their educational experiences prior to the implementation of CETT. CETT staff, teacher trainers, principals, teachers, and parents shared their own learning and teaching experiences in reading and writing before CETT, including from their own childhood and, as appropriate, as educators. This section presents findings from interviews and focus groups that illustrate the early educational experiences of these participants.

Learning to Read and Write through Formal Schooling

In both interviews and focus groups, CETT stakeholders described their own early experiences in learning to read. Principals and teachers were not asked this question directly, but they were asked how they first learned to *teach* reading and writing. When answering, many of them referred back to their own experience in learning to read, with the result that data was gathered on this topic from all of the respondent groups. Answers in the Spanish-speaking countries were similar, and common themes emerged across all three regions. However, some cultural and linguistic issues were different in the Caribbean, and those are noted.

Learning by Means of Rote Memorization and Copying

Participants in all three regions explained that learning to read and write in their primary schools had involved large amounts of copying and memorization. In the Spanish-speaking countries, reading was synonymous with decoding words and spelling. Respondents mentioned learning to read using methods that focused on learning syllables, such as “*ma, me, mi, mo, mu,*” and then combining them to make words. The goal of writing was “*la buena letra,*” or beautiful penmanship and not comprehension. In the Caribbean, respondents also reported learning to read using rote methods, although those methods focused on memorizing words rather than syllables.

There was a book; this was around 1977. I learned it all by heart, so I could hold it up and say everything that was in it, so I thought I knew how to read. Then, someone said, “Here, read this newspaper.” But I could not read it at all. I had memorized the book, and thought that was reading, but I could not really read.

- CETT staff, Andes

One of the things the reader had was a lot of repetition. Words were repeated constantly. It was using sight words so once you knew those words and were able to read them you were called a reader. I cannot remember if letter sounds were learned. I know we learned by looking at it and calling it. Teachers did what we call configuration, using rhymes.

- Teacher trainer, Caribbean

Most respondents reported learning to read in traditional, teacher-centered classrooms. In those classrooms, students did not contribute to the generation of knowledge and teachers expected them to simply memorize and copy.

Learning to Read as a Traumatic Experience

A number of participants in the Andes and Central America described their early schooling as traumatic. They mentioned experiencing physical punishment during reading instruction, including having their ears pulled, being hit with rulers, or kneeling on corn.

It was an experience of anxiety for me to learn to read because if I did not get things exactly right, I was physically punished.
- CETT staff, CA-RD

Teachers imposed punishments not only for bad behavior, but also for getting answers wrong. A few participants mentioned a saying, “*La letra con sangre entra,*” (“letters are learned with blood” or “reading is introduced through blood”). In contrast with the other two regions, Caribbean interviewees did not refer to physical punishments or traumatic experiences.

Learning to Teach Reading and Writing

Across the three regions, educators recalled they had learned few, if any, effective strategies for teaching reading and writing prior to CETT. Teacher trainers, principals, and teachers commented on their experiences in pre-service teacher education programs, during student teaching, and in in-service teacher training. Many respondents named specific methods they had learned about during their pre-service teacher training, such as the “analytic method” and the “global method,” but felt that they had only learned the theory. Several described their initial shock at facing a classroom wondering what to do with the children.

The way we studied in the normal school was with “planas,” copying syllables, and memorizing. We learned about teaching, but when we got to the school, we asked, “But what do I do?” We did not learn what to do with the children.
- Principal, CA-RD

Reading was taught in an isolated manner – spelling, comprehension, everything separate.
- Teacher trainer, Caribbean

Some teachers mentioned being terrified at the thought of teaching first grade because teaching reading is a primary objective. One teacher even transferred to a rural area in order to avoid a first grade assignment in the area where she lived.

Similar to pre-service teacher training experiences, those educators who held positions as student teachers commonly reported that the experience did little to prepare them for teaching children to read. In Central and South America, study participants described student teaching as a form of servitude to the full-time teacher, similar to hazing, in which the practice teacher was required to clean the floors and carry out various services for the teacher, but did not actually learn any teaching strategies. Other participants mentioned taking advantage of student teaching to work individually to improve their reading instruction practices.

For example, I tried to do what the theory said; I moved the desks, having students work in groups or in pairs. I ended the day very worried because the students did not know how to do it... I needed to study more.
- CETT staff, Andes

Educators’ reports of in-service teacher training experiences were also somewhat negative. Most participants reported trainings provided either by their Ministry of Education (MOE) or other donor programs that were limited primarily to workshops with little follow-up. MOE trainings and guidelines were described as theoretical practices that were not useful in the classroom.

We had standard training, when we went from one curriculum to another, but training on reading and writing or disciplines, we have not had that.

- Principal, CA-RD

There were trainings from the MOE, NGOs, but they were not very good. They did not have any follow-up. Now we have follow-up, never before.

- Teacher, Andes

On one of the Caribbean islands, educators reported that the MOE had formed a partnership through the teachers' union with a teachers' union in Canada. The partnership resulted in joint seminars, held every summer for many years, where local and Canadian educators shared best practices. Participants described these trainings as highly beneficial and good motivators for teachers, but limited, because there was no follow-up or continuity.

Respondents also reported that most training opportunities were not focused specifically on teaching reading and writing and thus did little to build teachers' content knowledge in that subject area. However, there was some evidence that reading and writing was a special focus of professional development in the Caribbean. For example, some of the teachers' colleges responsible for CETT already had literacy specialists on staff before the beginning of the program. The existence of positions for literacy specialists indicates a difference in how teachers in the Caribbean were learning to teach reading and writing.

Despite reports of negative teacher education experiences, when asked if what they had learned was useful, many said yes; they had learned useful things that became the underpinning for future learning. A few pointed out that the traditional methods of reading instruction they had learned encouraged discipline and respect for authority, and one added that what she had learned was useful because she fit in when entering a school as a new teacher.

Education Reform Efforts Pre-CETT

CETT stakeholders were asked to describe the characteristics of education reforms related to early literacy instruction that had occurred in their countries prior to the implementation of CETT.

Respondents in all three regions reported the presence of reforms that focused on updating traditional methods of literacy instruction. It became clear that while CETT was innovative, it built upon pre-existing ideas about innovations in student-centered literacy instruction.

C-CETT (St. Vincent and the Grenadines)

The Caribbean had several influential educational reforms that seemed to help prepare teachers for moving beyond traditional methods of teaching. For example, in St. Vincent and the Grenadines, the MOE tried to advance more integrated literacy instruction at about the same time CETT was beginning. All of the teachers interviewed in the present study, however, reported that no significant training on how to implement the new approach was provided.

Centro Andino (Bolivia and Peru)

According to respondents in Bolivia, an education reform in the 1990s sought to move teachers beyond traditional methods of teaching. The reform provided *asesores* (supervisors or advisors) whose role was to visit teachers and help them implement new methods. Likewise in Peru, the MOE supported a reform movement that provided updated curricula, texts, and teacher training at the elementary level.

Many of the CETT teacher trainers and training coordinators had been involved in these earlier reform efforts.

Yes, there was an official discourse...We were talking of an education more centered in the student, more active, with the student as protagonist.

- CETT staff, Andes

In both countries, these reforms emphasized constructivist ideas. Respondents reported finding the reforms useful but lacking sufficient specific strategies for teaching early grade reading and writing. Some who had worked in those reforms commented that the teacher trainers were of uneven quality and needed training, and that not enough classroom follow-up was provided.

CETT CA-RD (Guatemala and Nicaragua)

In both Guatemala and Nicaragua, respondents mentioned a variety of special projects, some initiated by the MOE and some funded by donors or NGOs. Some Nicaraguans mentioned a reading method they found useful called FAS (*Fonético, Analítico, Sintético*, or Phonetic, Analytic, Synthetic) brought to them by the Cubans in the 1980s. However, the overall finding was that while such efforts were helpful steps they often lacked specifics on how best to help teachers improve.

When the Ministry began training on the new curriculum, I entered the group of teacher trainers. It was very general. We trained all the teachers in the same things, not necessarily what they needed. We went to monitor their classes sometimes, but we could not help them because we did not have the training to know how to help them.

- Teacher trainer, CA-RD

Key Findings

- Reading instruction prior to CETT tended to be teacher-centered and focused on teaching students to memorize and copy.
- Teacher training programs prior to CETT tended to offer little ongoing support or follow-up, and did not focus specifically on building content knowledge in reading and writing.
- Education reforms prior to CETT had begun to incorporate some student-centered instructional practices, laying the groundwork for the CETT teacher training model.

Reported Changes in CETT Stakeholders

Respondents reported that participation in CETT led to important changes in both their attitudes and behavior. This section describes those changes for each of the stakeholder groups studied: principals, teachers, parents, and students.

The direct beneficiaries of the program were the teachers and principals who received in-service training in effective reading practices and school management through CETT. Each CETT provided training to program teachers and all three provided some training to principals or school administrators, though this training was not always mandatory. In some cases, principals were encouraged to take the training with their teachers.

The indirect beneficiaries of the CETT program were the parents and students. Though they did not receive direct training from CETT, the research team attempted to gauge changes among members of both groups to provide the richest understanding of a paradigm shift. This section focuses on the reported changes in all groups based on primary data gathered from CETT staff, teacher trainers, principals, teachers, and parents, and from secondary reports of changes among students.

The first indicator of a paradigm shift among key stakeholders was a change in their attitude or the attitudes of others, often reported as a willingness to accept a new way of thinking and conceptualizing one's role in education. The second indicator of a paradigm shift was a change in behavior, often reported as a new way of teaching reading, organizing professional development or reading instruction, relating with students or teachers, or engaging in the classroom.

The research team was able to draw out personal changes in both attitudes and behaviors noted by CETT stakeholders. The most common responses were (a) changes in attitudes, including self-efficacy and school climate, and (b) changes in behaviors, including increased professional development opportunities at the school level, parental involvement in supporting their child's reading, and student reading practices.

Increased Self-Efficacy

Teachers and principals reported experiencing an increase in both self-efficacy (belief in their own competence) and professional confidence as a result of their participation in CETT. Some respondents noted that before CETT, they often doubted their ability to teach reading or lead schools, but masked their insecurities for fear of losing their jobs. One participant noted that though she wanted to learn new techniques, she did not want to ask for help and "appear less competent in front of the other teachers." CETT provided an opportunity for teachers to learn in peer groups that fostered confidence through a sense that they were not alone: Colleagues faced some of the same challenges.

I learned to be innovative. The challenges are not only mine... we can find solutions together. Now we help each other, we work with our colleagues.

- Teacher, CA-RD

When asked how they had changed personally, most teachers and principals responded that they had increased confidence in the work they were doing and a greater appreciation for their profession. Some principals also mentioned their new awareness of the critical importance of early success in reading and writing, and the importance of their role in that process.

Now I have confidence I can work with any level. Now I am not a principal, I am a helper...they come ask for help...we are really serving as resources. Now I am a principal who helps. One of my jobs was always to stimulate the interest of my colleagues in new areas. For me, working as a team is one of the best things. They will come to me for help. This is the best achievement, that I can help the teachers.
- Principal, Andes

Many teachers specifically reported changes in confidence and self-esteem resulting from their ability to implement new pedagogical practices in their classrooms. They appreciated the CETT training because it provided them with practical strategies for teaching reading. There was a common theme to the varied narratives across the regions: Now that I know what to do in class, I am no longer afraid to teach first grade, because I am confident that I have strategies that will enable my children to learn to read and write.

A number of teachers moved from a model emphasizing decoding and penmanship to a model emphasizing meaning that focused on comprehension and expressing one's ideas in writing. This visible change in their concept of what reading really is suggests an underlying paradigm shift. In this area principals, CETT staff, and teacher trainers were able to clearly distinguished CETT teachers from non-CETT teachers.

They [the teachers] speak specifically to comprehension. They see it as a new approach to the teaching of comprehension. Teaching comprehension was new.
- Teacher trainer, Caribbean

We now find they are using a different discourse about reading and writing. It is different from other teachers.
- Teacher trainer, Andes

Improved School Climate

A key indicator of shifting paradigms under the CETT program was a change in the school climate. Many participants from each of the stakeholder groups interviewed noted that CETT improved relationships among principals and teachers, teachers and students, teachers and parents, and others.

No man is an island, no one stands alone. I see that if we can cooperate with one another, then this world will be a better place. Because of the initiative, we were able to assist and help the education system to move forward in regards to literacy.
- Principal, Caribbean

Principals and Teachers: Cooperative Working Environment

Principals reported that CETT contributed to positive changes in their relationships with teachers. Most found the CETT program helped create a more cooperative working environment in which teachers would come to them more often to ask for help. Principals were happy to be involved in helping guide their teachers and further the CETT teachings. The development of a new collaborative school climate also occurred among teachers within schools. Principals spoke of changes in teachers' attitudes towards having other educators in their classrooms. At the beginning of the program in the Caribbean, principals reported that teachers felt very uncomfortable with teacher trainers or other staff observing them in the classroom because they perceived these visits as inspections. However, over time, they began to appreciate the feedback of having another person in the classroom. Many principals referred to this

point, saying they visited classrooms more often and found teachers more open to collaborative work with colleagues and to receiving constructive feedback.

Relations with the teachers have changed, and are more positive now. They will come and tell us what they need.
- **Principal, CA-RD**

Teachers and Students: Positive Support in the Classroom

Teachers and other stakeholders reported that participation in CETT contributed to improved classroom climates, particularly in relations between teachers and students. Teachers reported that they found their relationships with students to be interesting and rewarding. Many teachers attributed the change in climate at least partially to group work and learning in pairs: Students had the opportunity to interact with peers and to share ideas with each other. In addition to its focus on reading instruction, CETT training included useful strategies for effective classroom management and positive approaches to discipline. Some teachers and principals noted that although they had spent a significant amount of time disciplining students in the past, through CETT they had learned strategies for engaging students that avoided having to impose harsh punishments.

It is easy to see if a teacher has really appropriated CETT. If there was a good interaction with the students, then you knew the program had taken hold.
- **CETT staff, CA-RD**

CETT program staff and teacher trainers noted that CETT stakeholders frequently mentioned changes in teachers' perceptions of students' abilities. Teacher trainers explained that traditionally, teachers tended to see themselves and their students in a "banking model" of education: The teacher possesses knowledge that they deposit in students' minds. Some teachers reported that this model of teaching had been promoted in their pre-service education. In contrast, the training provided through CETT promoted the attitude that children possessed their own knowledge. Study participants reported that teachers trained through CETT became more likely to encourage students to demonstrate their knowledge, both orally and in writing.

Before, everything was our idea—the children did not have ideas. Now they have ideas.
- **Teacher, Andes**

Teachers have been very surprised at how fast their students are learning.
- **Principal, CA-RD**

Teachers and Parents: Partners in the Learning Process

Teachers trained through CETT reported an increased willingness to work with parents and include them as partners in the learning process. Respondents mentioned that parents were hesitant about the new approaches at first, but became supportive when they saw that their children were happier and learning more. Parents reported that they very much appreciated that teachers trained through CETT worked hard to earn their trust and encouraged active and regular contact with them. Parents reported that they now seek the teachers for advice on how to help their children and that teachers have made themselves available.

One of my teachers gave her cell phone number to the parents so they can call her if they need help with the assignments or the homework. They call her a lot.

- Principal, CA-RD

Since the implementation of CETT, some parents have become increasingly involved in schools and classrooms. Whether through helping to clean the classrooms at the end of the day, hold study sessions in their homes, or take over the class if the teacher cannot be there, parents reported feeling they have a larger stake in their children's education. Teachers also reported satisfaction that parents had become involved in the schools, although teachers in some schools expressed that getting parents interested in school activities remains a challenge. Overall, parents said they felt more a part of their children's education as a result of the holistic nature of the program and the new interest of their children.

Teachers and Teacher Trainers: Trusted Advice and Mentoring

The CETT program incorporated innovative pedagogical tools, in-class observation and modeling, in its training. Many teachers mentioned the usefulness of the teacher trainers' in-class demonstrations and the opportunities for reflection provided during the in-school follow-up visits. In particular, teachers reported that the positive and productive nature of these demonstrations and follow-up visits significantly improved relationships between teachers and their teacher trainers. In the past, visits from teacher trainers occurred primarily to inspect and judge teacher performance rather than to support their instruction. In contrast, teachers reported that the CETT model of in-class observation and modeling reduced their anxiety. Teachers reported that they had lost their fear of being observed in class. They now looked forward to the teacher trainers' visits and developed close relationships with them, sometimes calling them to ask for advice or materials.

Another characteristic of the CETT model that contributed to changes in the school climate was its long-term, ongoing nature. Teachers described previous teacher training programs as sporadic and short-term, allowing only superficial interactions between teacher trainers and teachers. In contrast, the ongoing nature of the CETT program allowed for the creation of meaningful professional relationships between teacher trainers and teachers. Teachers reported that CETT teacher trainers treated them like peers and as people with something valuable to contribute. This encouraged trust among teacher trainers and teachers, some of whom thought of their teacher trainers as mentors who showed them how to interact effectively with the students in their classroom. The structure of the CETT follow-ups likely facilitated a paradigm shift in school climate and may have contributed to the teachers' adoption of the model in their classrooms.

I was yearning for a program like this. The teacher trainer was a motivating force. It was like a transformation.

- Teacher, Caribbean

They think [the CETT training] does not compare with other trainings they received. The others were only theoretical. This touched the heart.

- Teacher trainer, Andes

Study participants reported that their exposure to the CETT program had improved their attitudes about themselves and their abilities as principals or teachers. They also described improvements in their professional relationships resulting from changes in the ways they perceived other key stakeholders.

Changes in Behavior

According to respondents, the CETT program changed both attitudes in relation to reading development and instruction and behaviors among all stakeholder groups. This section details some of the reported behavioral changes among principals, teachers, parents, and students.

Principals and Teachers: Professional Engagement

Some principals reported that the CETT program caused them to become more closely involved in their schools, particularly in reading and writing. Increased involvement led to a new balance in their roles as administrators: The principals spent less time as school managers and more as instructional leaders. Several principals organized regularly scheduled staff meetings when groups of teachers met with the principal to work on lesson plans and share activities. One principal commented that during these meetings, teachers chose to sit in a circle to facilitate discussion, a physical arrangement similar to the classroom layout encouraged by teacher trainers to facilitate student interaction. Principals also reported holding workshops to inform parents and some even conducted their own action research to improve their knowledge of literacy.

Teachers became more engaged in furthering their own learning independent of the CETT program. Many described working on advanced degrees, some have become teacher trainers or principals, and some now work in the MOE. Some teachers stated that they are now trying to read more and in some cases have even written stories for the children. Teachers reported becoming interactive leaders rather than holding on to traditional teacher-centered authoritarian roles in the classroom.

Parents: Greater Participation to Support Student Literacy

Although parents and students were not direct beneficiaries of CETT training, many respondents also reported behavioral changes in both groups that were likely to influence student learning at school. Parents increased their support for their child's learning in general and for students' literacy activities in the classroom and at home in particular.

CETT parents highlighted the challenges both their own and their parents' generation faced in their role in their children's education. Study participants were asked how much parental support they got for their own education. They commented that it had been difficult for them to get the help they needed because their parents (a) did not know how to read or write and could not help their children with their assignments or encourage reading, and (b) often worked long hours and were too tired to help their children with school assignments. Prior to the CETT program, participating parents were likely to continue using the ineffective parenting techniques learned from their parents just as teachers were likely to continue using the ineffective teaching practices modeled by their predecessors.

Parents reported that their indirect exposure to the CETT program contributed to changes in the ways they interacted with their children around school. Parents reported taking on more responsibility to help their children with their homework and assignments, even if they themselves did not understand the concepts. They often described specific homework assignments designed to involve family members. A student, for example, was asked to interview her grandmother or to write about his father's experiences when he was young. Parents reported that the more they became involved in their children's education and learning process, the more the family worked together. Other parents mentioned that the family now works as a team, that they are more willing to help their children with homework and school activities, and in some cases to even learn with them. One grandmother said that her grandchild had taught her to read.

We participate in everything. We have learned that we all have to work together: fathers, mothers, teachers, and students.

- Parent, Andes

Respondents specifically reported behavioral changes in fathers. Some respondents noticed that fathers who had not been as involved in their children's education in the past, were now more involved and proud to take part in school activities after CETT. One father mentioned that parents had been asked to come to the school to read stories and that some had written their own. He went to the school library to read children's stories and get ideas for a story he would write and read to the children.

The role of the parents now is less mechanical; it is not just checking homework and [there is] more father-student interaction. We participate more.

- Parent, Andes

Students: Growth in Imagination and Confidence

The CETT model consciously focused on increasing the active participation of students in the generation of knowledge in the classroom. For example, it emphasized activities such as students reading aloud and creating original texts. Many study respondents reported changes in student behavior as a result of exposure to the CETT program.

Respondents described seeing more interactive and inquisitive children in CETT classrooms than in non-CETT classrooms. Some mentioned that children who had been very shy and afraid to speak up in class had lost their timidity and become active participants in class or group work. Increased enthusiasm for reading and writing was the most common personal behavior change among students. Many respondents spoke about children who now love to read and gravitate to books, even at recess.

Students go to the library in their classrooms and read books during break and lunchtime... they would hurry to finish to go to the library.

- Teacher trainer, Caribbean

Most groups, but especially parents, focused on their children's higher level of imagination, critical thinking, and questioning. Beginning in the first grade, students learn to write their own name and are asked to report on where they live and how old they are. For many parents, these activities were very different from what they had done in school. Although the research team attributed these changes to a generational shift in the educational system itself, rather than changes brought on by the CETT program, it is worthwhile to note that parents now believe that their children have a greater capacity for literacy skills than they had ever expected.

My daughter came home from school and asked me why she had four names. I explained to her that she had two first names and two last names to identify her from everyone else. I was impressed she was asking these questions in reading class.

- Parent, CA-RD

What [the students] are learning is more advanced. What they are getting now is what we used to get in grade six.

- Parent, Caribbean

Participants also noted a significant change in the writing done in the early grades. CETT children were writing original stories at a very early age. Rather than memorizing or copying stories from the board, CETT students were learning to synthesize their own thoughts in writing and express their own ideas in

story form. Participants reported that students in CETT classrooms have learned to (a) share the stories they have written, (b) ask their parents for help looking up information, and (c) engage with texts, such as cutting and pasting pictures from newspapers or magazines onto construction paper.

The study respondents shared their thoughts on whether the CETT students were better readers and writers.⁷ Though they were quick to discuss changes in behavior, many could not specify changes in actual learning. Many did report that children were reading better because they “understand what they read” and were writing better because they were using their own ideas to create stories, instead of rote copying.

It is a process. My daughter creates stories, poems; she wrote them all herself and they are her ideas.

- Parent, Andes

In non-CETT classrooms, students read by syllables. CETT students, even if they read slowly, they read the whole word. They are used to reading the whole text now... they are used to reading.

- CETT staff, CA-RD

The findings reported in this section are not trivial. Not only do they provide evidence of a paradigm shift in instruction for reading and writing, they suggest that key stakeholders interviewed for this study demonstrate numerous characteristics of schools and teachers that are effective in teaching children to read and write.

Key Findings

Participation in CETT facilitated changes in the attitudes of all key stakeholders:

- Principals and teachers reported an increased sense of self-efficacy in delivering effective reading instruction.
- Teachers reported positive new attitudes about students’ abilities to learn and engage in the classroom.
- Teachers reported changes in their concepts of reading development and effective instruction. They began to focus on comprehension and expressing one’s ideas in writing.
- All participants reported that improved relations among students, parents, teachers, principals, and teacher trainers improved the school climate.

Participation in CETT facilitated changes in the behaviors of all key stakeholders:

- Principals reported implementing more professional development opportunities for staff in addition to the CETT training.
- Teachers reported more personal and professional learning, from reading literature to attending educational programs.
- Parents reported interacting more frequently with their children to support their reading acquisition. Notably, fathers increased their own participation in their child’s education.
- All key stakeholder groups reported an increase in student engagement in reading and writing activities, observing students more frequently reading books and writing original stories.

⁷ The research team did not test students on techniques in reading and writing, and therefore did not apply any quantitative measure of program impact on students. The observations and opinions of teachers, parents, and other stakeholder groups were the only indicators of improvements in student reading and writing.

Perspectives on CETT Training

CETT participants were asked how their personal behaviors and attitudes had changed, and what components of their CETT training (or the CETT training of others) they considered the most and least effective in bringing about this change. The information for this section came mainly from principals and teachers, CETT staff, and teacher trainers. Principals tended to emphasize the holistic nature of the CETT model, while teachers tended to emphasize the knowledge and practices they gained from the training.

Most Useful Aspects of CETT Training

When asked what the most useful components of CETT were, many teachers resisted making a choice, saying that CETT provided a package that included several equally useful aspects: effective face-to-face training with hands-on practice, useful materials, and ongoing follow-up and coaching in the classroom. They spoke about how important it had been that CETT incorporated both training in new techniques and modeling the new techniques in the classroom. Most principals also commented on the “total package” of the CETT training. Principals viewed their school’s access to a specialist (the teacher trainer who provided in-class follow-up as a result of the CETT program) as a great asset. These CETT teacher trainers became a part of their schools, helping to transform them into “CETT schools.”

Teachers emphasized the new instructional strategies from CETT that they were using, particularly those focusing on reading comprehension and student writing. Some provided examples of effective techniques to increase children’s understanding, such as using visual aids or having children act out concepts. Teachers who mentioned initial skepticism or confusion about what they were learning, said they had been convinced of the validity of the new approaches when they saw what their students were capable of doing. Teachers in the Caribbean often mentioned the use of diagnostic instruments to assess children’s needs and plan appropriate strategies. Teacher trainers mentioned improvements in teacher planning.

Most important for teachers: hands on methods. New strategies coupled with the equipment or instructional aides and how to use them appropriately and effectively.

- Principal, Caribbean

For my part, we learned new things. CETT used different materials and teaching techniques. I learned so much, because before it was so mechanical and based on memorization. We learned about phonemic awareness, learned activities, oral and written. The first year we did not understand completely.

- Teacher, Andes

Teachers reported that the CETT training introduced them to new content knowledge, especially the concepts of phonemic awareness and the emphasis on reading comprehension. Teachers also mentioned the importance of effective classroom management, action research, teacher learning circles, and the support provided by principals and parents. Teachers in the Caribbean tended to emphasize the focus they had learned on using the results of assessment and differentiated instruction to meet the individual needs of students.

It is important to note that the teachers interviewed had been committed to CETT; some had worked with CETT for several years. They, as well as teacher trainers and CETT staff, mentioned teachers who had found CETT to be too much work or too time consuming. However, others mentioned that when

teachers saw the results they were getting with the students, they began to make more of a commitment to the program, often during the second year of training.

Importance of Follow-up

The system of follow-up visits was extremely useful in shaping teacher practices and facilitating a paradigm shift. It also involved a significant commitment of time and resources from the CETT staff, teacher trainers, and the teachers themselves. For example, CETT teachers in Guatemala participated in three, eight-hour in-person trainings; eight, four-hour teacher circles; and ten, four-hour independent study sessions in 2009. They also received an average of six follow-up visits from teacher trainers during the academic year.

Teacher trainers and training coordinators considered follow-up to be the most innovative component of the CETT package and many felt that it made the biggest difference in helping teachers make changes. It seems possible that the ongoing follow-up assisted teachers most in making a paradigm shift. However, many teachers asserted that in-class follow-up went hand in hand with the training; the two cannot be considered separate components.

The follow-up was important because we could see what the teachers had retained from the training... when we saw what they were doing in the classroom.

- Teacher trainer, CA-RD

What I found very interesting was that we did not only go in to look, we went in to do. We learned how to help, and we got the opportunity to go in and act, help with the teachers... That mentoring and monitoring was a very good aspect of the program.

- Teacher trainer, Caribbean

Optimal Length of Training

CETT teacher training was ongoing throughout the school year in all regions, though the amount of time devoted to teachers' in-service training varied by region. This was different from many traditional teacher training programs in Latin America, which tended to be short-term or sporadic.

In the Caribbean, many schools were in CETT for the duration of the program and teachers often participated in CETT training for several years. Some teachers stated, however, that they would have preferred a shorter training that served more teachers. For example, rather than having six teachers from one school in training for six years, they might prefer having twelve teachers in training for three years so that more schools and children could benefit.

In CETT CA-RD and Centro Andino, training models varied. Though most teachers participated for two years, others attended for three or more years. Some respondents suggested that two years was the minimum necessary for teachers to achieve desired change. They felt that many teachers remained uncertain after the first year. The second was essential to help teachers develop deeper understanding and proficiency in the new methodologies, so that they would not abandon them. However, some teachers suggested that there could be fewer sessions and less follow-up in the second year if training were scheduled according to the teachers' needs.

Training should be for at least two years, three if you really want to move teachers to higher levels and consolidate learning.

- Teacher trainer, CA-RD

Training for Principals

In all three regions, respondents noted that training for principals had been an important component in bringing about a paradigm shift at the school level. CETT informed the principals about the new techniques their teachers had learned and described the level of school and community support they would need to succeed. CETT also provided principals with management methods that encouraged personnel interaction. “Before we had worked in a vertical manner; now we learned to interact more with the teachers and students in the school.” When a separate training for principals was not available, the principals were encouraged to attend trainings with their teachers.

We had training, and participated in teacher training. Principals were asked to assess other teachers in other schools. We learned things from seeing other schools and brought those things back to our school.

- Principal, Caribbean

All participants emphasized that the willingness of principals to attend the trainings and to change the way they approached school management had been necessary for CETT to succeed in their schools. In Guatemala, for example, the principals who attended trainings with their teachers were the innovative force behind the *escuelas lectoras*—model schools that expanded CETT to all grades. The principals enlisted the community, parents, and other teachers to support the CETT classrooms and replicate the new techniques. In contrast, the likeliness of program success decreased when a principal resisted CETT and was unwilling to change.

For me, the great change depends on the principals. If the director is enthusiastic, we have a successful project. If not, the project does not work. The director’s support is important.

- CETT staff, Andes

The criteria were that the program be piloted in schools where the principals had good leadership skills and were energetic. As the project evolved the importance of these criteria unfolded. The weak principals did not yield the desired results. Some principals charged ahead, while others slowed down implementation.

- MOE staff, Caribbean

The consensus among study participants was that all of the components of the CETT model were important in promoting change in CETT classrooms. Though in-class follow-up was considered the most innovative component, it incorporated other components of the model, including teacher training and professional development materials.

Key Findings

- Specific characteristics of the CETT program appeared to support a paradigm shift among key stakeholders, including the program’s ongoing nature of supporting professional development during and after the in-service teacher training.
- Teachers reported that the most useful aspects of CETT training were learning (a) techniques for teaching reading and writing in the classroom, (b) techniques for managing the classroom, and (c) technical concepts related to early grade literacy.
- Study participants emphasized the key role principals played in supporting CETT teachers and classrooms, and the importance of providing training about the CETT program for both principals and school administrators.

Reported Changes in CETT Institutions

The research study team examined whether the presence of systematic and long-term changes provided evidence that a paradigm shift had occurred in CETT institutions. The first section presents data from interviews with CETT staff regarding the ways in which the CETTs affected their institutions. The second section presents data from interviews and focus groups with training coordinators and teacher trainers about changes they experienced and their perspectives on the CETT program.

The data collected suggests that the CETT implementing institutions all experienced a paradigm shift. The main areas of change in institutional attitudes or behaviors included the institutional expertise in effective training of literacy professionals, the development of new academic programs in literacy, and staff members' knowledge of effective literacy instruction and professional development practices.

Capacities in Teacher Training and Reading Instruction

Developing a training model was very difficult, and we ended up having to hire people from the outside to help set it up. We almost lost the program because we did not have the expertise to do a training model.

- CETT staff, CA-RD

The implementing institutions in each region began CETT with varying professional capacities. In the Caribbean, USAID chose the implementing institution because of its experience in teacher professional development. In Central and South America, although some institutions had on-staff teacher trainers who had participated in previous education projects, few people in each institution had in-depth expertise in language development and the reading process at the start of the program. Furthermore, institutions involved in the program had varying levels of experience with training.

A key systemic change resulting from the implementation of CETT was building capacity in reading development, acquisition, and instruction among the implementing institutions. These institutions had three main tasks. The first was to hire people who were already effective teachers and teacher trainers and train them to be experts in the reading and writing process. The second was to develop a comprehensive approach to staff development for teachers in service. The institutions were also tasked with building awareness in the schools, and the greater community, about the importance of early grade reading. All of these activities were integral to fostering a paradigm shift at the institutional level.

CETT staff described capacity building in reading development and professional development within the implementing institutions as evidence of a significant paradigm shift. These institutions had developed an effective teacher training model and a corps of teacher trainers who were available as resources in their countries.

More and more, the teachers' colleges are taking responsibility for the schools; [this] never used to happen... some of these institutions send student teachers out with CETT methodologies.

- CETT staff, Caribbean

The project has helped to make the faculty of education better known. It gave us more influence and more opportunity to develop training methods and action research. The MOE is now asking us to train teacher trainers on action research in some regions.

- CETT staff, Andes

Influence on Higher Education

The literacy associates degree is based on [the principles of] the CETT program.

- Teacher trainer, Caribbean

In the Caribbean, respondents reported that CETT had influenced the content of existing higher education programs in education and motivated the development of new programs. For example, the C-CETT lead implementing institution, the Joint Board of Teacher Education (JBTE) at the University of West Indies, was asked to create a new degree program in literacy in Tobago. At a higher education institution in the Eastern Caribbean, a former CETT staff member revised the local associate degree program to include four new language arts curriculum courses. Several respondents reported that they believed the CETT program was instrumental in creating an awareness of the need for such specializations in higher education.

Advanced academic programs or specializations in the field of reading are relatively uncommon in the Spanish-speaking countries that participated in the CETT program. During the implementation of the CETT program, several CETT institutions created new degree programs. For example, respondents at the Universidad Peruana Cayetano Heredia (UPCH) in Peru reported that their Faculty of Education significantly increased its capacity as a result of the CETT experience. Accomplishments there included developing a Master of Education program with both a major and an online degree program in Teaching Reading and Writing. Likewise, the CETT 2008–2009 annual report submitted by Centro Andino reported that all three countries had implemented academic programs in reading and writing in accord with each country's regulations in higher education. This development of new degree programs in reading may be evidence of an overall paradigm shift in higher education in each region.

Changes in Institution Staff

It has been a life-changing experience.

- CETT staff, CA-RD

It did change how I think about reading and writing. I took a more positive outlook. Basically I'm a mathematician- it really changed my entire outlook- I know now that it does not matter where the student is at- you give us three years, and that student will be brought up to mastery unless there is some sort of special need. We can guarantee to move a set of students from at-risk to performing on or above grade level within three years. The CETT has changed my entire outlook towards literacy.

- CETT staff, Caribbean

CETT staff members spoke eloquently about personal changes they had experienced during their years with CETT, including changes in their understanding of the reading process. One respondent described his initial suspicion about CETT and how he changed his mind when he saw students reading in class. Another respondent had been a firm believer in constructivist principles, but after the CETT experience embraced a more balanced approach in which one picks the combination of strategies best suited to the situation and the students. Some mentioned a new and more profound understanding of the importance of the early reading process and the fact that the entire educational system depends on that early learning. CETT staff shared the importance of interacting with communities and parents and experiencing the challenges and rewards of working with other institutions and countries.

Training Coordinators and Teacher Trainers

Like teachers, CETT teacher trainers received ongoing training in how to teach reading and writing instruction. Several teacher trainers described the enormous impact ongoing training had on them. They found the resources useful and read a great deal, but they also appreciated the fact that the training modeled the methods they should use when training teachers. Some said it felt like they had been to a university. They all particularly valued the time spent reflecting on their work with their colleagues.

How I learned to do it [to train teachers] was that I was the center of attention and I led the group. I was the one who knew everything. Now, I am just one in the group, the role now is different.

- Teacher trainer, CA-RD

Before we used to say, "Do it this way," but then we learned to say, "Here is one way, but you can figure out other ways."

- Teacher trainer, Andes

Several teacher trainers mentioned a significant change: They had learned the importance of consulting with the teachers, respecting what they already knew, and finding out what they actually needed before starting training, rather than routinely providing a "one size fits all" training. The clear parallel between this new attitude among teacher trainers towards teachers and a new attitude among teachers towards students suggests a similar paradigm shift. The parallel indicates that teacher trainers were successfully modeling the behaviors they wished teachers to use with students. This included not only listening to and respecting the ideas of the teachers but also using a diagnostic approach in order to differentiate instruction according to teachers' needs. Notwithstanding this progress, some felt that the goal of differentiated instruction for teachers had not yet been fully realized, but was rather an area of significant learning that they would try to implement better in the future.

These institutions' implementation of CETT contributed to an internal paradigm shift and to an external boost in the institution's reputation. Coordinators mentioned that the faculties of education in their institutions were better known and better equipped. With a cadre of highly qualified teacher trainers available, their institutions are called upon to provide training and expertise. The CETT staff developed a close relationship with CETT schools and valued the new associations with educational colleagues in other countries.

Reported Changes in the Broader Education System

The data described above suggest that the CETT program did contribute to a paradigm shift among key CETT stakeholders in the schools, districts, or parishes where the program was implemented. One of the paper's hypotheses is that such a paradigm shift at the local level has the potential to foster a broader paradigm shift within the national education system. To explore this hypothesis, respondents were asked whether they perceived any changes in the national dialogue about reading and writing that could be attributed to CETT. This section examines their reports and discusses trends in each region.⁸

Political Will and Working with Ministries of Education

CETT staff and teacher trainers were asked whether they were aware of any broader changes within their country's educational sector as a result of the CETT program. Most respondents answered this question specifically by presenting evidence of program scale-up and more generally by noting the interest of the MOEs in adopting the CETT program on a national scale. MOEs were well aware that, to varying degrees, the CETT model would require departures from traditional attitudes and behaviors about teacher training and literacy instruction in the countries where it was to be implemented. In agreeing to adopt the CETT model, MOEs explicitly or implicitly bought into CETT's theoretical model of reading development and instruction, its innovative instructional practices, and its holistic model of teacher training.

C-CETT staff and stakeholders noted that the MOEs in several Caribbean countries have shown overwhelming support for the CETT model. In most Caribbean countries that participated in CETT, participants reported that plans were underway to scale up the program and expand the number of CETT schools. As Ministries in the different countries began to incorporate various parts of CETT, some also absorbed former CETT staff to help carry on the best practices of the program. In St. Lucia and Dominica, CETT was adopted as the national reading curriculum and expanded to all primary schools. C-CETT also had an impact on local MOE programming. In Jamaica and St. Vincent and the Grenadines, MOEs launched new programs designed to use CETT methodologies.

CETT staff and teacher trainers in Centro Andino described the professional relationships they had established with their MOEs through CETT. Most participants emphasized how CETT gave the implementing institutions professional credibility and turned them into sources of knowledge and teacher training expertise for their MOE. In Peru, the MOE asked the UPCH to train teacher trainers and non-CETT teachers around the country. Most CETT staff in Peru and Bolivia agreed that their program scale-up successes had been on a regional level: Demand for expanding the CETT program came from districts and regions, rather than directly from the MOE. However, respondents were quick to point out that the MOE's focus on early grade reading and writing was greatly influenced by CETT.

CETT CA-RD participants noted the increased interest of the MOEs and districts in the CETT program. In Nicaragua and Honduras, for example, several respondents noted that MOE staff members' awareness of CETT's successes has increased their interest in expanding the program. Similarly, in Guatemala schools and local governments have voiced their interest in implementing the program. All participants agreed that the CETT program stimulated greater interest in reading and writing in the country, and the CETT schools themselves are now well known and there is widespread interest in

⁸ An in-depth study of the sustainability of the CETT program, which includes the program's impact on the broader education system, is discussed in the third white paper of the series. Here we focus on *stakeholder perceptions* of CETT impact on broader changes, mainly related to program scale-up within the MOE and expansion to non-CETT schools.

them in all three regions. The research team believes that the apparent willingness of national education systems to focus more on the importance of reading and writing, whether through programs or greater dialogue, is clear evidence of a greater paradigm shift.

Spillover of CETT Practices to Non-CETT Schools

Study participants reported that CETT practices have spilled over to non-CETT schools and teachers, more evidence of a burgeoning paradigm shift in the broader field of education in each region. Individuals trained under CETT have reported disseminating the CETT methodology. Many former CETT teachers have gone on to become either teacher trainers or principals themselves and have taken what they learned through CETT with them. These new principals are working to transform their new schools into CETT schools.

In 2008, I entered in this school, and I have tried to replicate many things from my former school in my institution. I took all these things to my school. This is my project. I tried to do it all in my school. Differentiated instruction was something I had learned with my trainer. My new school is not officially a CETT school, but we are replicating everything I learned, and they are helping me do this. We have systematized everything that we did, and my former colleagues have helped my former trainer and me. Through the Movimiento Pedagógico, I can get many materials and ideas.

-Principal (former CETT teacher), Andes

The CETT model appears to have influenced an important paradigm shift in the Caribbean through its influence on models of teacher training. C-CETT created a new teacher training model that established a relationship between pre-service teachers' colleges and the surrounding primary schools in each parish. The structure of the program attached a teacher trainer located at each teacher college to primary schools in their geographical area. This led to increased involvement of teacher trainers at the college with teachers in the primary schools.

More and more the teachers colleges are taking responsibility for the schools; that never used to happen. It is because of the structure, because the teacher trainer is in the college... that teacher trainer goes out to various schools, so that structure has been maintained which is excellent.

- CETT staff, Caribbean

Though most principals of teacher training colleges wished that their colleges had been more officially involved in the CETT program, they also spoke about the impact the program had already had on their institutions. One principal spoke about the impact of having the teacher trainers located at the college.

This is why I plugged for sustainability of [the] CETT methodology, because it brought out so many issues and strategies that would help in literacy instruction and getting children to read and write. Even today, the student teachers still use the resource room and are welcome to it. The lectures of the training coordinators were very cooperative and very extensive.

- Principal, Caribbean

In addition to the new interactive relationship with the teachers' colleges, C-CETT also created new regional standards for reading and writing. The Caribbean Community (CARICOM) adopted the CETT

standards as the first uniform set of standards for reading and writing across the entire English-speaking Caribbean.⁹

While the dissemination of the CETT model is to a certain extent supply-driven, with CETT participants taking the lead in spreading the model, examples such as CARICOM show that it can also be demand-driven. Ongoing demand for CETT training from non-CETT educators is an indication, if not evidence, that the program continues to influence the broader education system in each region. Moreover, the continued work of the cadre of CETT-trained professional educators in each country suggests the potential for ongoing influence on attitudes and practices related to teacher training and literacy instruction in each region.

Key Findings

Implementation of CETT appeared to influence the broader educational system through its formal adoption by some Ministries of Education and regional educational institutions, as well as through the informal spillover of its practices and methodology to teachers and schools who had not participated in CETT.

⁹ The Caribbean Community (CARICOM) is an association of fifteen nations and dependencies throughout the Caribbean whose purpose is to promote economic integration and free trade between Member States, as well as the coordination of labor, industrial, social, and foreign policies. The CARICOM was established in 1973 by the Treaty of Chaguaramas (http://www.caricom.org/jsp/community/revised_treaty-text.pdf).

CETT Program Challenges

Most of the stakeholders interviewed for this white paper consistently reported evidence of a paradigm shift as a result of CETT's implementation. An explicit theme of these interviews is that shifts in attitudes and behaviors in regards to reading acquisition, professional development, and instruction occurred because of the program's perceived effectiveness. At the same time, stakeholders reported numerous factors that challenged the program's effectiveness and potentially hindered a paradigm shift. These challenges included difficulties in regional cooperation, turnover of key program stakeholders, and teacher resistance to the CETT pedagogical model. This section outlines these challenges.

Regional Cooperation

Program staff interviewed for the study considered the regional nature of CETT both the program's greatest challenge and its greatest success.¹⁰ CETT was a regional program: Member countries were to share their experiences and best practices, and design a teacher training model that reflected both the individual and shared needs of teachers in each region. According to some participants, this task was initially quite difficult.

The greatest difficulty was agreeing because we were all so different, but in the end that became our greatest strength.

- CETT staff, CA-RD

CETT staff from each country had to agree on the five CETT components, including the teacher training model and the materials. In the Caribbean, respondents did not mention any major difficulties in agreeing on a common teacher training model. In the Andes and Central America, however, the countries did not always agree on a common approach for teaching reading and writing. Staff in these two CETTs mentioned the difficulties reaching consensus on the CETT components that hindered the implementation of the program. For example, in CETT CA-RD some countries initially developed their own unique set of materials for the program and it took considerable time for the region to agree on a single set of materials.

Eventually program staff learned to work together and respect each other's opinions and suggestions. As one respondent noted, each of the countries had to learn that their approach was not necessarily the only one, and that the countries all had something to share and learn from each other. CETT staff also explained that once they were able to come out of these initial conflicts, they were able to appreciate the various levels of expertise the different institutions were contributing to the program. These relationships ultimately strengthened the program.

Turnover of Key Stakeholders

For a paradigm shift to occur among stakeholders, the opportunity to learn was a prerequisite for any change in attitudes and behaviors. Learning is a developmental process that requires time and the frequent turnover of key CETT stakeholders reported by study participants was a challenge to both the program's effectiveness and paradigm shift. Turnovers occurred frequently among the teachers working

¹⁰ The first white paper of this series is dedicated to the regional nature of the program. It describes the regional concept of the CETT program, how the three CETTs designed and implemented their teacher training model, and the challenges of regional cooperation.

in CETT schools and some left their schools before completing the CETT training. Principals changed often, creating challenges in sustaining support for CETT classrooms among school administrations.

I have fear, regret, that one year the government will change. We all have this fear, no?
- Principal, Andes

Frequent turnover among ministry staff in each region required continued efforts to reestablish relationships and promote the CETT program. Turnover of the government or political party often meant that CETT staff had to rebuild relationships and ensure ministry support quickly to maintain program continuity. To offset these challenges, CETT staff often invited government officials to participate in CETT trainings and events to explain the program and its impact.

Teacher, Principal, and Parent Resistance to Change

It takes a special kind of teacher to do CETT. We have had teachers who are very reluctant to use the CETT method and have made it clear they will not use it in their classroom.
- Teacher trainer, CA-RD

Since the CETT program sought to change teacher attitudes and perceptions of teaching, reading, and the teacher-student relationship, one of the biggest challenges reported by study participants was working with teachers, principals, and parents who did not want to change their views or practices. In some cases, teachers and principals trained to use more “traditional” approaches had been practicing their teacher-centered methods for many years.

In many instances parents were also attached to the methods with which they had grown up and expected their children to learn in the same way. Teachers and principals often struggled to help parents see that reading was not only a process of decoding, but also involved understanding what had been read. To show the effectiveness of CETT, teachers organized reading fairs, competitions, and other events with the children in their classroom that parents could attend. Parents also visited CETT classrooms to see the differences in how teachers and students interacted.

In conclusion, the CETT program faced challenges to its effectiveness that likely influenced its ability to foster a paradigm shift in each region. The extent to which each of these factors detracted from the intended paradigm shift is beyond the scope of this white paper. However, understanding these challenges is useful in considering how educational programs might foster both large- and small-scale changes.

Key Findings

Facilitation of a paradigm shift in the CETT program was hindered by three elements: the regional nature of the program, turnover in school and ministry of education personnel, and resistance to change on the part of some key stakeholders.

Lessons Learned and Conclusions

The main objective of the CETT program was to create an innovative and effective model of teacher training for early literacy instruction across the region. In doing so, the CETT program facilitated a paradigm shift in educators' attitudes and behaviors in relation to teacher training and effective literacy instruction. The authors of this white paper propose that, to some extent, evidence of a paradigm shift may also be interpreted as evidence of program effectiveness.

Participants in this study reported ample evidence of a paradigm shift as a result of the implementation of CETT. Based on this evidence, we summarize the lessons learned to inform future education program designers interested in fostering a paradigm shift.

Lessons Learned

The lessons learned from CETT provide a unique opportunity to inform future program designers interested in executing innovative teacher training programs, interventions to improve reading and writing instruction, or large-scale, regional education programs.

- It is important to plan targeted and complementary interventions for all key stakeholders to facilitate shifts in attitudes and behaviors on a wide scale, both across countries and regions, and within countries.
- Program implementers should plan and implement interventions of sufficient duration to ensure that changes in attitudes and behaviors have adequate time to take hold.
- When programs are implemented over several years the turnover of key stakeholders at all levels is inevitable (e.g. schools, implementing institutions, and Ministries of Education). Program implementers should consider the development of mechanisms to train new staff members who enter mid-program, such as on-site mentoring by previously trained teachers or short-term, intensive training.
- Finally, it is important to plan for resistance to change by key stakeholders, especially in programs that are bringing about systemic changes in behaviors and attitudes. Programs should consider developing mechanisms to persuade people who are resisting change, such as clear program monitoring tools that communicate program effectiveness to stakeholders early in the intervention.

Conclusions

The changes in attitudes and behaviors that CETT stakeholders reported suggest that the CETT program fostered a paradigm shift among participants involved in teacher training and early reading instruction in each region. Achieving a paradigm shift (changes in the attitudes of stakeholders through learning) that increases peoples' involvement in improving their lives and environment is no small task. This white paper highlights the study's finding that paradigm shifts only occur amidst consistent, ongoing intervention. The change process at work is vulnerable to the turnover of program participants and participants' own resistance to change. However, it is possible to overcome these challenges when program characteristics are carefully structured to offset their negative influence.

The paradigm shifts resulting from the implementation of CETT occurred through learning, the *application* of learning, and participants' subsequent recognition of (a) increases in their own abilities as educators, and (b) improvements in their students' abilities as readers and writers. Most respondents noted that the changes they experienced were long lasting because the program taught them to think

about and understand the importance of early grade literacy in a new way. The research team believes that the reports of these respondents highlight CETT's success in fostering sustainable change.

My schools will never go back. The changes are within them. The love for their profession is in them. Maybe some percentage will, but most of them will never be the same.

- CETT staff, CA-RD