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INSTRUCTIONAL COACHING IN GUATEMALA: REFLECTION FOR REFORM

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ABSTRACT

This article describes action research performed by Guatemalan instructional coaches during intensive professional development. The focus was on building coaches' abilities to reflect on classroom teaching and cultivating habits of pedagogical reflection in their teachers. Coaches participated in four weeks of professional development courses, which included school visits, classroom observations, and video analyses. The courses prepared the coaches for a six-week online forum of field-based learning activities and action research. Preliminary results suggest that the coaches and their teachers improved their abilities to reflect on core principles of teaching and learning, but more work was needed in the areas of learning communities and assessment.

INTRODUCTION

Significant educational improvement or reform is a challenge in any country. Yet in Guatemala, with its recent 36-year civil war, 24 different languages, and extreme poverty, this challenge is particularly daunting. This article provides a description of efforts to reform the educational system by training instructional coaches to work with teachers and school directors throughout Guatemala.

Guatemala is among the poorest nations in the Western Hemisphere and has one of the highest rates of income distribution inequalities in Latin America. Ten-percent of the population controls 46% of the income and 56% of the population are below the poverty line (Valerio & Rojas, 2004). Guatemala's indigenous population, one of the largest in Latin America, represents roughly 80% of the poorest

inhabitants, about 40% of the total population (Instituto Nacional de Estadísticas, 2007), and is scattered among 19,000 small and rural communities. In 1996, Guatemala recognized 21 different Mayan languages; three other non-Mayan languages, Xinka, Garífuna, and Spanish, are also recognized. In total, over 50 different languages and dialects enrich and complicate reform efforts (Paul, 2011).

Guatemala consistently ranks at or near the bottom for Latin American countries on common measures of educational effectiveness (Urquiola & Calderón, 2006). Since the peace agreement ended the civil war in 1996, the Guatemalan government has made major attempts to improve education throughout the country. Nevertheless, education spending remains among the lowest in the world with only 3.2% of the Gross Domestic Product (GDP) spent on education in 2008, placing Guatemala 143rd worldwide (World Factbook, 2010). Moreover, in most rural settings formal education does not exist beyond sixth grade due to a lack of secondary facilities.

A recent reform effort has focused on teacher development related to the new National Curriculum (*Currículo Nacional Base*). An overarching goal of this curriculum is to move teaching from simple acquisition of skills and knowledge recall to the development of critical thinking skills and in-depth content understandings (Guatemalan Ministry of Education, 2012). Yet to teach these to a wide range of students, teachers need to build habits of reflection and inquiry-based action research.

In this article, we describe our participation in one of the programs of the United States Agency for International Development (USAID), *Reforma Educativa en el Aula* (Education Reform in the Classroom). The program was designed to improve instructional coaching in order to build teachers' habits of reflection and action research. We describe a set of leadership courses for the instructional coaches and the reflective action research that they conducted to apply their learning in their respective settings. First, we outline some of the primary needs that relate to coaching. Next, we describe the course and fieldwork themes and results that emerged from an abbreviated survey instrument and a focus group exercise. Finally, we provide our own reflections on the process as well as recommendations for future application in other settings.

THE EDUCATIONAL CHALLENGES

As in many countries, there are wide gaps between the resources in urban areas and those in rural areas. The vast rural areas receive very limited educational access and opportunities after the primary grades. Achievement gaps between the indigenous and ladino (non-indigenous, monolingual Spanish-speaking) groups in Guatemala are among the largest in Latin America with various studies finding 6 to 12 months of differences for language achievement between these two groups (De Baessa, 2002; Guatemalan Ministry of Education, 2009; Hernandez-Zavala, Patrinos, Sakellariou, & Shapiro, 2006; McEwan & Trowbridge, 2007).

Schools in Guatemala vary widely. In the larger cities, some schools may have morning and afternoon sessions with up to 40 to 60 students per class (Rubio & Chesterfield, 1998) and overall student populations in the hundreds or even thousands per school. However, only 58% of the municipalities have a secondary school (UNICEF, 2005). In rural areas, 46% of schools have multi-grade, multi-age classrooms (Guatemalan Ministry of Education, 2009), often quite small, and it is common to find schools that do not provide either preschool or even all of the six grades of primary school.

Given the wide diversity of student backgrounds and the lack of materials and teacher resources, teachers in Guatemala tend to lack the extra preparation required to meet individual students' needs. For instance, even though high percentages of students in most indigenous areas do not speak Spanish as a first language, instruction and materials are typically in Spanish, even in primary grades. Many indigenous students are trying to learn to read in a language that they do not know. Moreover, Daniel's (2006) study of 515 Guatemalan teachers found that literacy is often taught by having students copy word for word from books or from the chalkboard; therefore, repetition and memorization dominate many lessons. Our own classroom observations confirmed these practices.

Currently, Guatemala only requires aspiring educators to complete a curriculum that focuses on becoming a teacher during their study at the high school level. They may then immediately seek employment as a teacher (Kossack, Friedland, & Richards, 2005). When teachers graduate from teacher training, usually at age 18, but sometimes at the age of 16 or 17, they are eligible to be placed in a school. The Guatemalan Ministry of Education does not require licensure or college level courses in order to become a teacher (Daniel, 2006). Without significant intervention or support, "teachers . . . model their teaching after that of the educators who taught them" (Daniel, 2006, p. 96).

Teachers in Guatemala often have very little time to reflect and be coached, and many teachers must work at more than one job. Because teacher salaries are inadequate, some teachers work at an *escuela* (a government run public school) in the morning and then spend their afternoons working at another job or at a *colegio* (a private school) (Daniel, 2006). Therefore, such teachers have very little time to review student work, to plan lessons, meet with other teachers, or to reflect on the effectiveness of their teaching. Thus, a looming challenge is the professional development of practicing teachers. Even though teacher preparation programs can certainly be improved, a high priority is developing and supporting the teaching of practicing teachers.

A common model of staff development and training for teachers in Guatemala is that of travelling to an urban center for large group training, receiving one or two days of intense training in new teaching practices, and then returning to their own schools to practice what they have learned. Unfortunately, research demonstrates that in this type of model the average degree of implementation of the new practices is no more than five-percent (Joyce & Showers, 2002). On the other hand, if the

new teaching practices are demonstrated to the teacher who then practices them in her/his own classroom in front of a coach and receives immediate feedback from the coach, then the implementation rises to approximately 90-95% (Joyce & Showers, 2002). Yet such high percentages of implementation also depend on highly-skilled instructional coaches.

When we began this project, we had two major questions that guided our work:

1. How can Guatemala, with its limited resources, develop the teaching skills of current teachers?
2. How can Guatemala, with its limited resources, develop the academic leadership skills of school directors?

These two questions led to the development of the courses, fieldwork activities, a portfolio, and culminating conference that are described below. However, in order to measure the effectiveness of the work in responding to the two questions, we developed a third question to gauge progress of the efforts to date:

3. How can we and our participants measure the effectiveness of our professional development efforts?

With the development of the third question, which became the first phase of evaluation of the project, we obtained permission from our coordinators at USAID to conduct research with the coaches that would be considered exempt under Institutional Review Board (IRB) requirements. In the following sections, we describe the participants involved in the project, the specific interventions (coursework, fieldwork, portfolio development, and culminating conference), and our findings and recommendations.

Participants

For the first cohort of the program, educators were selected from several areas of the nation by the Guatemalan Ministry of Education, with an emphasis on participants from the regional Ministry office in Quiché. The Ministry informed us that they selected 27 persons with leadership characteristics. We had no input into this part of the process and do not know what the specific leadership characteristics may have been. However, all participants must have completed a four-year degree to be eligible for this program that was offered at the Master's degree level. Three participants already had Master's degrees, all in education. The participants consisted of nine females and 18 males ranging in age from 23 to 62, but most were between 30 and 45 years of age. This cohort began with 27 participants, three of which were field-based supervisors, eight were instructional coaches, and 16 worked in other Ministry of Education managerial positions. Twelve of the 27 participants worked in the state office of the Ministry in Quiché.

We learned that, in general, the supervisors and other managers tended to have much more paperwork and inspection duties than the coaches and worked with anywhere from ten to 40 schools, and with anywhere from 50 to 150 teachers. These participants were a diverse group within themselves ranging from program coordinators of local and regional programs to upper level administrators, including the deputy state minister of education. All participants had been working with the Min-

istry of Education for several years or more. We did not ask participants about their years or levels of teaching experience, but all had been teachers at some time.

As compared to the supervisors and managers, the coaches tended to have fewer schools to visit but had considerably greater direct contact with teachers. An instructional coach working in an urban area might have 25 schools located within a few miles of the office, while a coach in a rural area will have many schools that are a day's journey on bus and on foot, often with no opportunity to return home at the end of the day.

Twenty-six of the 27 participants completed the four courses in the project because one coach suffered a vehicular accident and dropped out. Only 12 of the original 27 completed the fieldwork activities that followed the coursework in time for this study. Beginning with the second session, the number of participants remained steady at 12; this aspect was the largest limitation to the present study. We will refer to all participants as "coaches" for the purposes of this paper, since our overarching goal was to develop coaches.

INTERVENTION

In response to the many needs outlined at the beginning of this article, we were asked to develop training courses by Juarez and Associates, a consulting organization that administers the *Reforma Educativa en el Aula* project. We collaborated with the Ministry of Education and San Carlos University (*Universidad San Carlos de Guatemala*) to design courses and training activities for instructional coaches. All instruction and activities took place in Spanish.

We developed a series of four intensive courses to be taught for one week each over five weeks in Quiché, a medium-sized city in the rural region of Guatemala about three hours from Guatemala City. This region was considered by the Ministry of Education to be suitable for the courses with the philosophy of serving the rural and multilingual populations where the need is greatest. The courses and fieldwork activities were developed as part of a specialization (known as a diplomado) being developed by the San Carlos University to count as credit towards the master's degree. Coaches completing all requirements would receive a certificate of completion. The first course began in June 2010 and a final session for the participants who completed all coursework and field activities took place in October 2010, a total of approximately four months elapsed time from start to finish.

Because we wanted the participants to learn and use professional inquiry as a primary tool, we incorporated action research concepts and activities into the courses. Action research (Carr & Kemmis, 1986; Lewin, 1948), for the purpose of this project, is the analysis of a cycle of actions, analysis of evidence, and reflective adaptation.

Courses

We developed four courses that were taught over a five-week period. The

first two courses focused on leadership training, the other two provided instructional training, and all courses included aspects of coaching.

Three underlying beliefs provided the rationale for the content of the courses: 1) coaches need to assume leadership roles, 2) instructional coaching in schools and classrooms has a high-leverage effect on instruction, and 3) school directors must also receive coaching in leadership and instruction.

The courses were titled: 1) Introduction to Educational Leadership, 2) Leadership for Educational Reform, 3) Evaluation, and 4) Effective Teaching and Learning. The courses were taught five days a week for six hours per day with a one week break between courses two and three. Each course involved readings (most to be completed prior to the beginning of each course), homework, daily quizzes on material, and included class discussion and engagement in activities that took most of the time in class. In each course, the National Curriculum formed the basis of many sample activities, given that a major goal of the Ministry of Education was to have all teachers in the country correctly use this new curriculum.

Three fieldwork visits to local schools took place during the four courses. The courses were designed to be sequential with some material common to all courses, including the coaching skills and activities, as well as techniques for group development and decision-making. In each course, an additional instructor from Juarez and Associates observed and participated in all activities with the objective of teaching the same course to a different cohort in the future. Initial planning called for these four courses and fieldwork activities to be replicated six additional times to prepare a total of over 175 coaches to work in schools throughout the nation.

The first course (Introduction to Educational Leadership) served as a basic introduction to leadership and included the following main topics and activities: establishment of norms for the entire diploma program, the differences between leadership and management, the clarification of personal values, the development of a personal vision of leadership, goal setting and monitoring, and the building of personal and professional confidence and trust. A profile of the ideal coach began to be developed in the first course and was added to during each succeeding course. A simplified coaching model was introduced and practiced in the classroom (Wise & Hammack, 2011). The second course (Leadership for Educational Reform) provided an understanding of change processes, coaching techniques for change, and ways to work with resistance to change. This course also included research on effective professional development, including the need for coaching in order to attain transference of new skills to the school and classroom setting. Three basic tools developed for the diploma program, the Continuum of Coaching, the Cycle of Reflection, and the Conversation-Observation-Conversation (COC) model were introduced in this course. On the final day of this second course, the coaches divided into three groups, with each group visiting a different school, meeting with the school director and asking questions we had prepared ahead of time, observing at least eight classrooms, and preparing findings to share

with the entire group.

The third course (Evaluation) covered the design, evaluation, and revision of curriculum and objectives in order to reinforce effective assessment of the national curriculum. The course emphasized the development of effective summative and formative assessments across grade levels and content areas. Coaches received in-depth training and practice in observing and coaching teachers in assessment and feedback. Coaches also developed their expertise at creating appropriate assessments and rubrics for objectives.

The fourth course (Effective Teaching and Learning) focused on coaching to improve a teacher's instructional strategies and skills. The course emphasized the alignment of teaching to assessments through a backward-planned approach (Wiggins & McTighe, 2004). Based on the objectives and materials of the national curriculum, coaches practiced their coaching skills and learned to use a variety of coaching tools to improve teachers' use of instructional time in a supportive manner. The course and participants' presentations modelled many of the effective strategies that teachers would be asked to use. Finally, a vital component that was emphasized was improving the conversations that preceded and followed observations.

On the final day (Friday) of each of the final three courses, coaches put their learning into practice by interviewing school directors and observing classrooms in local schools. On Thursdays we developed questions for the director and a protocol for observations. After visiting several classrooms the next day, we discussed the wide range of positives and areas of need that we noted in the schools. This allowed us to see and discuss the course's concepts right away.

Course framework

The following framework for the courses was based on research on instructional coaching practices, combined with information gathered from classroom observations, analyses of curricula and assessments, and interviews with school directors, education leaders, and teachers. The framework guided the design of the project (intervention) and the data collection and analysis process. The framework consisted of four dimensions of effective educational organization and practice.

Dimension 1: Cycle of Reflection

Significant educational reform takes time and reflection (Fullan, 2009; Hallinger, 2003, Leithwood, 1994). Similarly, we emphasized that deep changes required deep questions about core teaching practices. For this reason, a key dimension was the cycle of reflection, shown in Figure 1. The cycle tends to proceed clockwise, but not always. For example, while planning, a team might go back to the evidence to help inform the strategy being planned. The deep question about teaching remains in the center because even teachers can get sidetracked as they discuss the many complexities of teaching and their students.

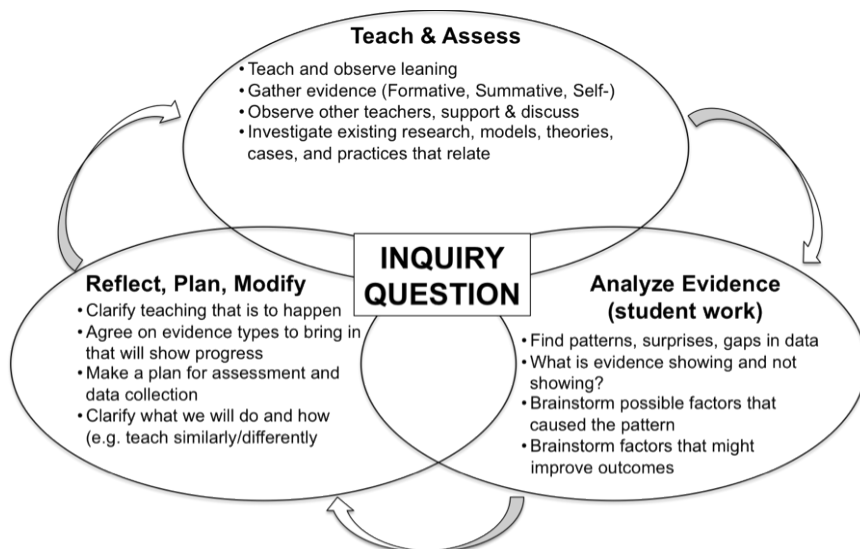


Figure 1. Cycle of Reflection (From Zwiers, 2009)

Dimension 2: Alignment of objectives, assessments, and instruction

The teacher and the coach refine the teaching question that will guide them and focus their conversations in a particular area of teaching. The question is based on the model of alignment and backward planning (Wiggins & McTighe, 2005), in which educators, in the following order, (1) clarify what students need to learn (outcome), (2) identify how students will show their new knowledge and skills (evidence/assessment), then (3) design an instructional experience or task (strategy) to help students do well on the assessments. Daily and weekly formative assessments are used to make sure students are on the path to doing well on summative assessments such as tests and projects. A wide variety of evidence should be used: writing samples, quizzes, journals, test scores, reading inventories, video, etc.

Dimension 3: Instructional Leadership

A number of studies demonstrate a correlation between leadership and student learning. For example, Marzano, Waters, and McNulty (2005) found an overall correlation of .25 between leadership practices and student learning in a meta-analysis involving over one million students. The same study provided 21 *leadership responsibilities* that correlate with student learning and that were used in our work with coaches. Sample responsibilities include Knowledge of Curriculum, Instruction, and Assessment; Monitoring and Evaluating effectiveness of practices; Change Agent that challenges the status quo; and Focus and goal setting, among others. A more recent large-scale research project (Seashore, Leithwood, Wahlstrom, & Anderson, 2010) indicated additional leadership skills and knowledge related to student achievement, especially those related to collec-

tive leadership of formal school leaders working together with teacher leaders. We chose the leadership characteristics that would be most easily transferable to the instructional coaches in their daily work in Guatemala, such as development of a leadership vision, dealing with resistance to change, and strategies for building strong learning communities.

Dimension 4: Instructional Coaching Continuum

Coaches must play various roles to be successful. Bloom, Castagna, Moir, and Warren (2005) define coaching as “the practice of providing deliberate support to another individual to help him/her clarify and/or achieve goals” (p. 5). From this broad definition, we created a continuum model of coaching that was comprised of distinct, yet overlapping roles: Guide (*Guía*), Collaborator (*Colaborador*), and Coach (*Coach*) (Authors’ note: Coach is the term used in Guatemala, so we did not seek to develop a new term), as shown in Figure 2. An expert coach will use different roles in different situations.

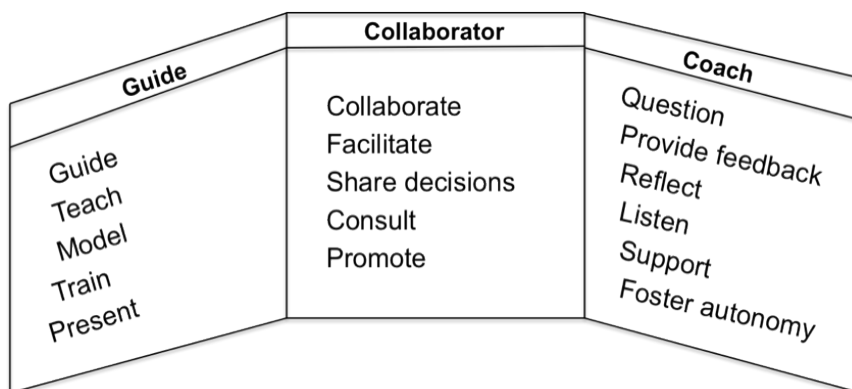


Figure 2: The Coaching Continuum (adapted from Atcheson & Gall, 2003; Glickman, Gordon, & Ross-Gordon, 2010)

The Guide role is the most similar to a mentor: a person with more experience helping another person with less experience. Within that role, the guide may model lessons, provide training, and make presentations. The Guide role is used when working with teachers who have little knowledge of a particular teaching strategy or technique. As an example, the Guide may present a new teaching technique to a teacher or group of teachers. The Guide is the primary role assumed when developing and presenting professional development. The Guide may also present techniques to help directors become academic leaders.

The Collaborator role works primarily with groups and helps teachers and directors understand and use group dynamics. The Collaborator helps people develop better relationships, share information, and reach understandings or agreements. For example, the Collaborator may lead a meeting of a school staff using group development processes to plan for grade level or content area collaboration.

The role of Coach is often thought of as a “thinking partner” or a “critical friend” who helps the individual or group clarify their thinking. Rather than be-

ing a critic, a Coach comes alongside a teacher and shares the struggles, building the teacher’s abilities to independently solve problems. The Coach often uses Socratic questioning techniques to help the teacher or director discover the answer to an issue on her/his own. A Coach may ask questions of a teacher to assist in planning when and how a new instructional strategy could be most effectively used with their students. Another example would be helping a school director clarify the vision for the school and how to empower staff members to be collaborators in that vision.

The effective coach will find that all three of these roles—Guide, Collaborator, and Coach— are useful in the daily work of coaching teachers and leaders. The key to effectiveness is to know when to use each role. The overarching role of the coach in all roles is to build teacher and leader autonomy over time (Knight, 2009; Wise & Jacobo, 2010). If coaches find themselves continually in the role of Guide, rather than Collaborator or Coach, one must question whether the clients are beginning to work at a more autonomous and reflective level than that of a beginning teacher or leader.

In order to assist coaches with their understanding of coaching in classrooms, we adapted the clinical supervision model (Atcheson & Gall, 2003; Glickman, Gordon, & Ross-Gordon, 2010) to fit the needs of the coaching and called it the Conversation-Observation-Conversation (COC) process. The model included a conversation before the observation to either support the presentation of a new teaching strategy or to simply understand what the teacher will be teaching. The second step was the collection of evidence during the observation, and the third step was the feedback and reflection about the observation and evidence gathered. The COC process makes use of the cycle of reflection in helping teachers reflect upon their practice.

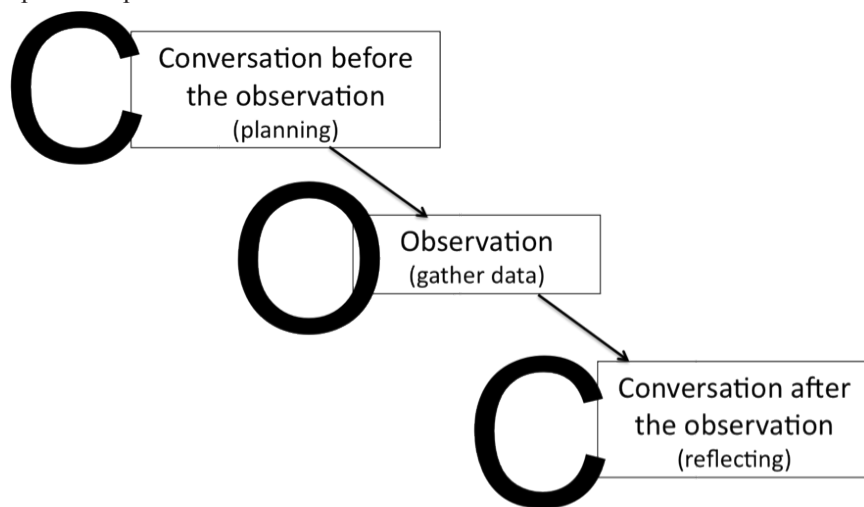


Figure 3: The Conversation-Observation-Conversation (COC) process

Fieldwork Activities

Upon completion of the four courses, we assigned the coaches a series of six fieldwork activities to be carried out in one of the schools in which they were working. The fieldwork activities were designed to be completed over a period of twelve weeks, with approximately two weeks allotted for each set of assignments. Given that we (the two lead instructors) returned to the United States, the fieldwork sessions were managed online through Moodle, a web-based course management system available free of charge (<http://moodle.org>). We designed a module for each of the six sessions which included a virtual space for coaches to upload their assignments, another for coaches to comment and critique each other's assignments, and another for coaches' comments related to the focus of the session.

The assigned work for each coach for each session included a written assignment (usually a description plus a reflection of an assigned activity), two critiques of two different written assignments of fellow coaches, and two comments related to the focus of the session. Thus, each coach had five separate activities for each session. Date-specific deadlines were set for all activities to be posted to the web. For each session, we wrote a short anecdote related to the session including a reflective question to guide the coaches' thinking during the activities for the session. We also responded to many of the assignments and comments of the coaches to further guide their learning.

Below is a brief description of each online session, its focal themes, and its assignments.

Session 1 - Reflection

- A. Analysis of the academic leadership of the school director.
- B. Analysis of the learning-teaching-evaluation process.
- C. Summary of needs and a tentative plan to work with the school director and the teachers.

Session 2 -Improving the Conversation

- A. Put the tentative plan into action.
- B. Description of a cycle of reflection with the school director.
- C. Description of a COC process, including student evidence, and a reflective question regarding continuous improvement.

Session 3 - Alignment of Objectives, Teaching and Evaluation

- A. Description of the conversation with the school director regarding alignment of lessons and articulation between grade levels.
- B. Description of the conversation with a teacher regarding how to improve alignment of lessons through backwards mapping, formative evaluation, activities, and cognitive skill development.
- C. Presentation of a teaching technique to a minimum of two teachers and the school director: Description of the experience, how the technique was selected, and self-assessment of the presentation.

Session 4 – Learning Communities

- A. Utilization of a group development technique with at least three teachers and explain the concept of learning communities.
- B. Request the school director's support for the learning community.

Session 5 – A Culture of Continuous Improvement

- A. Analysis of the evidence of progress of instructional leadership and effective instruction in the school with the school director and a coaching conversation regarding next steps.
- B. Work with the school director to refine and take ownership of the plan

Session 6 –Synthesis of Learning

This session was used to identify major findings and opportunities for further professional development on an individual basis related to leadership, curriculum, evaluation, and teaching. We asked the coaches to self-evaluate their action research of the first five sessions and individually asked some of the coaches to reflect upon particular aspects of the assignments and comments they had submitted, based on our own assessment of their learning.

Portfolio

We assigned the coaches the task of developing a portfolio of findings from the coursework and the fieldwork activities. Coaches were to collect material in a meaningful manner that would lead to a plan for their own continuing professional development at the end of the project. The portfolio requirements were the following:

- Personal vision statement
- Final report of fieldwork activities (major findings of their action research)
- Analysis of evidence of their personal learning needs and prioritization of those identified needs
- A personal plan for their professional development

Culminating Conference

We held a two-day conference in Guatemala City with the 12 coaches who had completed all coursework and fieldwork activities. We opened the conference by reviewing the major topics of the coursework and fieldwork activities in an interactive exchange. Coaches told us that, as they began to apply their recently deepened knowledge and skills in actual schools, they realized that they needed additional practice and coaching tools.

When we asked the coaches to select topics that were most important in their learning, six major areas emerged: a profile of an instructional coach, tools for the instructional coach, strategies to model and present the methodology of the National Curriculum (*Curriculo Nacional Base*), formative evaluation techniques, tools and techniques to overcome resistance to change, and developing learning communities. We then assigned small groups the task of writing a brief summary of significant learning and needs in a particular area. The results were later expanded into a guidebook for instructional coaches in Guatemala.

On the second day of the conference, each coach presented her/his portfolio

and participated in an individual exit interview with one of us. A final ceremony was held with authorities from USAID and the Vice-Minister of Education in charge of the project, and a certificate was presented to each coach. Final grades for each coach were submitted to the university. We also used the opportunity to have coaches complete short surveys and participate in a discussion of outcomes and next steps of our own action research.

Development of Survey Instrument

A brief survey related to the major objectives of the course and fieldwork consisting of 19 questions was developed by the authors. The survey instrument was reviewed by our Guatemalan colleagues associated with the project in order to increase validity and reliability; however, there was no opportunity to field-test the instrument. A Cronbach's alpha was calculated with the pre- and post-results providing a value of .893, which indicates an internal consistency (reliability) of Good to Excellent (George & Mallery, 2003). The survey was distributed to the 12 participants completing all activities during the final day of the culminating conference. Sixteen of the questions asked participants to assess their level of knowledge or skill before (pre) and after (post) the courses and fieldwork activities. All items were rated using a scale from 1 to 5 (1 being low).

FINDINGS

As we mentioned earlier, our work was guided by the following questions:

1. How can Guatemala, with its limited resources, develop the teaching skills of current teachers?
2. How can Guatemala, with its limited resources, develop the academic leadership skills of school directors?
3. How can we and our participants measure the effectiveness of our professional development efforts?

While we consider the first two questions to be of the utmost importance, the third question helped us answer them. We designed and provided a first round of a professional development program to instructional coaches who would, in turn, develop the skills of teachers and school directors. The activity portions of the coursework, fieldwork, portfolio, and culminating conference were all designed to bring about ongoing reflection and refinement of the work of the coaches. For the purposes of our own research, we developed the survey that was administered at the end of the culminating conference and did a focus group activity. In this section, we present a summary of the results and next steps as perceived by the coaches that participated in all aspects of the intervention. Table 1 provides the questions from the survey, the mean ratings for pre- and post-intervention and the difference between the pre- and post- ratings.

Table 1
Differences between pre- and post-intervention ratings on the survey instrument

Question	Pre-Mean	S.D. Mean	Post-Mean	S.D.	Difference Pre/Post-Mean
Knowledge of the process of action research	2.8	0.9	4.3	0.7	1.5
Knowledge of key elements of leadership	2.3	1.0	4.5	0.5	2.2
Use of the key elements of leadership	2.3	0.9	4.5	0.7	2.0
Have a personal vision	2.8	1.4	4.8	0.4	2.1
Group development	3.4	0.8	4.4	0.7	1.0
Work with school directors	2.9	1.0	4.3	0.7	1.4
Work with parents	2.7	1.1	3.8	1.2	1.1
Manage trust	2.4	1.1	4.1	0.8	1.7
Use of reflective questions	2.1	1.2	4.2	0.7	2.1
Knowledge of effective teaching	2.8	0.8	4.6	0.5	1.8
Knowledge of formative assessment	3.3	0.5	4.6	0.5	1.3
Formation of a learning community	1.6	0.8	4.4	0.5	2.8
Skills of an effective instructional coach					
-Support and motivate teachers	2.8	0.8	4.4	0.5	1.8
-Help teachers to reflect upon and improve their teaching	2.6	1.2	4.3	0.6	1.7
-Help teachers to analyze the National Curriculum and make lesson plans	2.1	0.9	4.0	1.0	1.9
-Help teachers to form learning communities	1.8	1.0	4.3	0.8	2.4
Overall Mean	2.5		4.3		1.8
Standard Deviation	1.0		0.7		

Note: A scale of 1 to 5 was used for the ratings.

Open-ended questions:

- 1) What is the most important thing you have learned in the project?
- 2) What would you like to have learned in the project?

The survey results provide insights into the participants’ perceptions of each area of the intervention. The overall mean of pre-ratings indicated that participants rated themselves as having fair to moderate (2.5 on a scale of 1 to 5) knowledge of the areas covered by the major objectives. The overall mean of post-ratings indicated that participants rated themselves as having fairly high (4.3) knowledge of the areas. Thus, an overall difference of the pre- and post-means of 1.8 points suggests a fairly large perceived gain in knowledge and skills.

The highest pre-intervention ratings were ‘Group development’ (3.4) and ‘Knowledge of formative evaluation’ (3.3) and the lowest pre-intervention ratings were ‘Formation of a learning community’ (1.6) and ‘Helping teachers form learning communities’ (1.8). The highest post-intervention ratings were for ‘Personal vision’ (4.8), ‘Effective teaching’ (4.6), and ‘Formative evaluation’ (4.6). The lowest post-intervention ratings were for ‘Work with parents’ (3.8) and use of the National Curriculum (4.0).

Differences were calculated for each area by subtracting the pre-rating from the post-rating. Participants perceived their greatest overall growth from the pre- to post-rating to be in the areas of ‘Formation of a learning community’ (difference of 2.8) and ‘Help teachers to form learning communities’ (2.4). The least perceived overall growth occurred in the areas of ‘Group development’ (1.0) and ‘Work with parents’ (1.1). Independent t-tests were calculated for the pre- and post-ratings for each of the 16 questions and for the overall pre- and post-ratings. All results indicated significance at the .001 level or higher. That is, all post-intervention ratings were significantly different from the pre-intervention ratings.

Respondents were not identified on the surveys; thus no conclusions may be drawn from the position of each respondent. Nonetheless, we were told that those who came into the project as instructional coaches (seven of the 12 respondents) had received previous extensive training in group development techniques and effective teaching—a factor which possibly affected the self-ratings to some extent.

As mentioned above, the survey contained two open-ended questions: The first asked respondents, “What is the most important thing you have learned in this project?” Seven of the 12 responses mentioned the tools for coaching and effective teaching; four respondents mentioned reflection, while three mentioned leadership. Other responses included, “Improve the education in my country” ($n = 2$), “learning communities” ($n = 2$), and “backwards mapping” ($n = 2$). There were numerous other responses with no more than one respondent each.

The second question was, “What would you like to have learned in this project?” There was no pattern of response; however, the National Curriculum was mentioned twice as needing more emphasis. The final question asked respondents to rate the project on a scale of 1 to 5. All 12 respondents gave a rating of “5.”

Results and Next Steps as Perceived by the Coaches

At the end of the first day of the culminating conference, we led a discussion of results and future goals. The 12 coaches were randomly assigned to groups of three and asked to prepare a poster with 1) major results obtained and 2) next steps. Each of the groups reported, and we asked the group to come to a consensus in order to synthesize the responses. We did not ask the participants to prioritize responses. Table 2 shows the results obtained and next steps as perceived by the coaches.

Table 2
Results Obtained and Next Steps as Perceived by the Instructional Coaches

Results Obtained	Next Steps for Coaches
Acceptance by teachers	Deepen understanding of leadership with school directors and teachers
Access to classrooms	Improve alignment, application and planning of the National Curriculum
Initiation of the change process	Continual improvement of the coaches
Increase in school leadership capacity	Achieve adequate use of evaluation tools by teachers
Increased commitment to quality teaching	Plan more professional development for teachers
Use of new teaching strategies	Involve more educational authorities in the teaching/learning process
Discovery of abilities and skills	Consolidate learning communities
More planning and evaluation in schools	
School directors became aware of their own leadership	
More inter-institutional collaboration	
Arrival of materials ¹	
Beginning of learning communities	

¹Coaches informed Ministry of Education authorities of the lack of books and materials in some schools and these were sent within a short time.

Anecdotal comments by the coaches

While anecdotal comments are of little value in quantitative research, we believe that they provide a qualitative context to the results and next steps. These comments were obtained in the group and individual sessions with each coach. The coaches stated several times that they believed that they had “opened doors” to the classrooms of teachers and the offices of school directors throughout the country. They stated that the process of change had begun, in spite of much initial resistance by teachers and school directors. They believed that they had begun to help teachers improve the process of teaching and learning in Guatemala.

However, they also stated that this was a beginning. They believed that much more work was needed, built upon what they had learned and the work they had begun. In general, coaches felt that the courses and fieldwork activities had been sequenced appropriately for them to utilize the activities from fieldwork in the same manner and order that they had learned. They felt that the fieldwork activities were too accelerated and that their work would take them more time to achieve results, even though the order of activities was appropriate.

One coach stated, “I have learned that you cannot just show up at a school, demonstrate a new teaching strategy to two or three willing teachers, and leave. You must involve everyone in the process.” Several coaches mentioned that the previous statement represented the process they most often used in their work prior to the project. Several stated that they had not previously understood that working with the school director was necessary. Indeed, some stated that, where the school director was resistant, little change was occurring in the school beyond

small pockets of one or two isolated classrooms.

We also found that, as the courses progressed, anecdotal comments indicated a greatly increased level of enthusiasm, even as the demands for new knowledge and skill development increased. While we did not formally gather qualitative data from the comments, we did note that the coaches sustained conversations and exchanged emails with us and among each other utilizing terms such as *scaffolding*, *backward planning*, *reflective questions*, *formative assessment*, *personal vision*, *learning communities*, to name a few. Coaches told us that they had heard some of the terms but had never fully understood how they “fit together into the big puzzle” and how to use them “on the ground” with teachers.

Limitations

There were several limitations in this study. Most importantly, we have sought to provide a description of our efforts to provide an action research-based model of professional development. As a descriptive study, it may include bias by the authors in describing the intervention and results. Our survey instrument was designed at the end of the study and does not provide true pre- and post-intervention ratings by the participants. The study relies on perceptual data throughout. Finally, the small amount of data collected is a further limitation.

DISCUSSION AND RECOMMENDATIONS

The results from the survey, group consensus on results obtained and next steps, and anecdotal comments suggest that the intervention had a positive effect on the coaches and the schools where they performed their action research. The survey results showed fairly large perceived gains in almost all areas of the content of the courses and fieldwork activities. It must be noted that the coaches came from varied backgrounds and evidenced a wide range of levels of background knowledge upon entering the program.

Thus, an important result of this action research points to a need for more emphasis, time, and practice in the formation of learning communities. While coaches perceived that they had a good foundation of knowledge and skills in group development, many stated that they had heard of learning communities; however, they had not learned the specific attributes nor did they have specific tools and processes to form learning communities. For example, they did not initially understand that formative assessments should be collaboratively analyzed to improve instruction over time. We all (instructors and participants) realized that more professional development was needed in this area.

Our major disappointment was the attrition in the number of coaches participating in the fieldwork. Once we analyzed this aspect with our colleagues in Guatemala, it was evident that the selection of coaches for future interventions must be undertaken with care and consideration of the person’s present position. While the information from the courses was perceived as motivating and important by those in administrative positions working in offices, only two of these

individuals completed the fieldwork activities. Of those already involved in some type of work in schools, almost all of those persons completed the fieldwork, with the exception of four who did not receive permission from their supervisors to participate in the fieldwork activities.

At the time of this writing, two replications of the four courses have taken place for two different cohorts with a total of 51 additional participants in other areas of Guatemala. The course content has been refined by the instructors and is planned for use with an additional four cohorts in different locations in Guatemala. Due to the school calendar, the fieldwork for the replications began with the initiation of the new school year. The courses now contain training on the use of the web-based fieldwork activities so that coaches are familiar with the technology before completing the coursework portion. All of those who did not complete the fieldwork activities in the first cohort have been informed that they may participate in this fieldwork. Initial indications reveal that almost all of the initial 27 participants have made or will make use of this opportunity to complete all fieldwork requirements and portfolio requirements for the diploma.

IMPLICATIONS FOR PRACTICE

While the preliminary results and anecdotal comments suggest that this project is beginning to make a difference in the teaching practices found in Guatemalan classrooms, several elements could be put into place in order for this work to be more effective. From our work with this project we would like to synthesize our recommendations to those who plan to undertake similar work.

- Work closely with a university to ensure follow-through of coursework and fieldwork. Since the university accredited the course and fieldwork, it would be helpful to have them more involved in the planning, delivery, and evaluation throughout such a project.
- Assist with the development of requirements for candidacy to the program and selection criteria. Since a number of the persons did not initially complete anything beyond the four courses, we believe that a more rigorous selection process could take place. A profile of the candidate should be developed and a structured application, recruitment, interview, and process for final selection developed. Also, candidates must be ready and willing to work with directors and teachers in schools during and after the intervention.
- Obtain written commitments from agencies employing the coaches freeing them from (or reducing) normal work commitments during the course and fieldwork portions of the intervention. We were surprised that during the first week of coursework, two of the participants said that they had to return to work. Indeed, five of the persons worked full-time after completing the daily six-hour session. At least three were told that they would not be able to leave their office positions to complete fieldwork activities. Writ-

- ten understandings and agreements may alleviate such issues.
- Utilize online teaching practices and train students to use the online platform during the early stages. Participants should be trained from the very first sessions of coursework and use the online platform to upload assignments and take part in online discussions. This would alleviate the problems that we encountered with students lack of understanding and insecurity about posting comments.
 - Make sure that all students have adequate access to technology for the course and fieldwork. All participants should either have a laptop computer (or access to a computer) and internet access in order to complete the requirements of the project.
 - Gather more evaluation data before and during the entire intervention. All pre-assessments should take place before beginning or in the first few days of coursework. Additional tools should be incorporated, such as structured interviews and/or focus groups with coaches, teachers, and school directors; observation data of specific behaviors of coaches, teachers and school directors; and perhaps some type of achievement data or other measures of learning by students. Where possible, evaluation instruments and processes should gauge pre- and post-behaviors and attitudes.
 - Conduct longitudinal research of the results of the intervention. A study should take place of the coaches and in the schools where they have worked to gauge differences one to two years after the initial intervention.

FINAL COMMENTS

We believe that we have fledgling answers to our three research questions. Certainly, there is more to be learned from these participants and others in successive cohorts undergoing the professional development. While initial results appear to be positive, Guatemala remains an extremely complex country, and more research is needed to ensure that change processes are having a long-term effect on the teaching/learning process. In closing, we are indebted to the committed people at USAID Educational Reform in the Classroom, Juarez and Associates, and the Guatemalan Ministry of Education for their collaboration throughout this action research project. A special thank you goes to Lic. Fernando Rubio, Dr. Leonel Morales and Lic. Abilio Girón of Juarez and Associates. Without their collaboration, this work could not have taken place.

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