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An Innovative Cross-Cultural In-Service Training Model: Findings from a Multi-Year Project

The effectiveness of a unique model of in-service training involving U.S. teacher educators and school teachers from Belize, Central America, is described based upon findings from a consecutive three-year period of the project. An evaluation component was integrated to provide a structure for program improvement, in which formative and summative data assisted in documenting the changes that had occurred. Delivered to three very different teacher populations, the project's effectiveness in providing professional development on nine topics related to special education was found to affect personal dispositions, enhance knowledge, and contribute to the attainment of new skills in profound and significant ways. Pertinent issues that emerged and implications for improving the in-service model are discussed.

Resultados de un programa innovador intercultural de formación de maestros

Este artículo presenta los resultados de un proyecto innovador de formación de maestros, que se llevó acabo de tres años, con maestros de EE.UU., Belize, y Centroamérica. Un componente de evaluación se integró para estructurar y permitir analizar los resultados de datos formativos y sumativos que asistieron en documentar los cambios que se fueron observando através del proyecto. El modelo de desarrollo profesional fue implementado con tres grupos de docentes muy diferentes y abarco nueve temas relacionados con la educación especial. Los resultados indicaron que hubieron cambios en las disposiciones personales, mejoraron en sus conocimientos, y ayudó a contribuir a la adquisición de nuevas habilidades de manera profunda y significante. Cuestiones pertinentes que surgieron a través del proyecto y las implicaciones para la mejora en el modelo de servicio se presentan.

نموذج لتدريب مبتكر، متعدد الثقافات وأثناء الخدمة: النتائج من مشروع متعدد السنوات

هنا موصوفة فعالية نموذج فريد من نوعه لتدريب أثناء الخدمة يشمل معلمين\ات، مربيين\ات ومعلمين\ات مدارس من الولايات المتحدة من بيليز، أمريكا الوسطى، الوصف تم على أساس النتائج من ثلاث سنوات متتالية من المشروع. قد تم دمج عنصر تقييمي لتوفير هيكل لتحسين البرنامج حيث تم الاستعانة بمعلومات تكوينية وختامية في توثيق البيانات والتغييرات التي حدثت لقد تم تسليم البرنامج لثلاث مجموعات مختلفة جدا من المعلمين\ات، ولقد تم التوصل إلى أن فعالية المشروع في توفير تطوير مهني في تسعة مجالات تتعلق بالتربية الخاصة تؤثر على التصرفات الشخصية، تعزيز المعرفة، وتساهم في اكتساب مهارات جديدة بطرق عميقة وهامة. وقد تمت مناقشة القضايا ذات الصلة والتي ظهرت أثارها على تحسين نموذج أثناء الخدمة

一个创新的跨文化在职培训模式: 一个多年项目的调查结果

基于一个连续三年的项目的调查结果，本文描叙了一个独特的涉及美国教师培训者及来自于伯利兹，中美洲的学校教师的在职培训的模式的有效性。一个评估的成分被包含在报告中，并以一个项目改进的构架借此来用发展性和总结性数据记载项目中的变化。施用于三种不同教师群体，项目的相关于特教的专业培训的九个方面的有效性体现于: 影响个人素质，加强知识，特别是新技能的获得。相关的议题以及改进在职培训的结论也在本文中有所讨论。

An Innovative Cross-Cultural In-Service Training Model: Findings from a Multi-Year Project

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Belize, a Central American nation slightly smaller than New Hampshire, is committed to providing a basic education to all its children and adolescents (Belize Ministry of Education, 2006). In regard to special education services, school-aged children have benefited through the promotion of inclusion in general education settings and establishment of special schools. Furthermore, the education ministry encourages the establishment of "partnership with the churches and other voluntary agencies" in order "to ensure that there exist adequate support systems for the delivery of appropriate and equitable educational services" (Belize Ministry of Education, 2006).

Rationale for Training Program

Serving children with disabilities has been expressed as a "moral duty (and) a genuine social responsibility and obligation to the equitable development of all children" (Belize Ministry of Education, 2006). Therefore, in 2001, after concerns were raised about a lack in special education preparation for its teachers, the first author's assistance was sought to develop an in-service program. Following a year of discussion, the first author agreed to develop the curriculum and establish a core group of U.S. trainers to facilitate the in-service education program. The Special Education Unit of the Belize Ministry of Education agreed to provide logistical support and invite Belizean teachers to

participate in the training opportunity to be held annually, for four days, in early August. These agreements, however, were not formal contracts and were subject to change based on availability of resources, perceived accomplishments of the training program, and withdrawal of any of the involved parties or associates. The agreements can be more aptly described as verbal promises, resulting from conversations, about the need to improve teacher knowledge and skills via a training delivery approach (or support system) most feasible for the pertinent stakeholders.

Purpose

While the project was primarily designed as a training program, it quickly became clear that an evaluation component must be imbedded in order to (a) obtain relevant formative and summative information; and (b) generate both qualitative and quantitative data for the purposes of program improvement and verification of its effectiveness. The purpose of this article is to describe the uniqueness of the in-service model, as well as its effectiveness, in three different communities in Belize from 2003 to 2005.

DEVELOPMENT OF AN IN-SERVICE MODEL

Organizing the annual professional development event (2003-2005)

Prior to each year's training, Belizean officials were consulted about the location and dates of training, expected number of participating teachers, and special education topic priorities. As teacher access to the special education training was a critical consideration, the officials had to first deliberate with various school district leaders in order to

survey teacher interest and identify possible training locations. As it turned out, the officials chose a considerably different regional location for each year of the training program in order to cater to the greatest number of teachers.

Once a decision was made about the location and dates, topic priorities and the expected number of teachers were discussed using the telephone and email. Based upon concerns and issues raised by school administrators and teachers from the surrounding areas, various themes were suggested by the officials. Four topics, which incorporated many of the concerns, issues, and themes, were then articulated. Depending on the site of the training and remoteness of the area, the number of Belizean teachers who indicated interest in participating in the training ranged from about 35 to slightly over 50.

Once there was an understanding about the aforementioned parameters, U.S. educators were sought to participate in the program. The program was marketed through outlets such as *Teaching Exceptional Children,* newsletters of professional organizations, emails, and personal contacts. Over 60 inquiries were received prior to the first year of the program. However, many cited the costs associated with the travel and the stay in Belize as being prohibitive and declined participation. On the average, per year, only a small pool of eight to ten individuals indicated interest in becoming involved. Furthermore, only applicants who submitted their curriculum vitas received serious consideration, which reduced the already small pool by another one or two individuals. The individuals were interviewed about their experiences and expertise in special education, and interests and strengths in cross-cultural teaching. Their résumés were shared with Belizean officials, and no concerns were raised about any of the individuals. In fact, after reviewing the résumés, the officials suggested changes in the topics of training in order to best utilize the expertise of the U.S. educators. The team of U.S. educators was then contacted and assistance provided in making travel and lodging arrangements, as well as directions to, and times of, initial meetings after arrival in Belize. These early conversations also emphasized the need to be flexible, creative, and spontaneous in the planning, delivery, and evaluation of the training program.

Program Design Concerns

The collaboration being forged between the Belizean officials and the first author was an example of what Bunnell (2006) identified as a significant worldwide trend involving greater collaboration and partnerships among international educational entities. However, there were not any clearly defined guidelines for the forging of alliances (Haywood, 2005) or standards for cross-cultural teaching and learning practices. At this stage of the evolution, Bunnell (2006) suggested a discussion on the development of a "new professionalism" as it related to the role of the trainer in international settings. In designing the Belize in-service

training model, two aspects of professionalism or the professional role in the international context became areas of most concern: (a) the instructional approaches of the program; and (b) cross-cultural considerations which could make or break relationships.

Program Instructional Approaches

This first concern related to the instruction of teachers who had very different resources available to them, compared to teachers in the U.S. Access to basic materials, equipment, and technology were some of the foremost differences. Based upon these considerations, and after consultations with Belizean officials, a face-to-face and constructivist method of instruction was deemed the most appropriate.

Consisting primarily of direct and sustained interaction between the teachers and trainers, the face-to-face approach was most appropriate for the anticipated group size of teachers. The face-to-face approach also provided an option in the incorporation of "low" or practical technology that teachers might already have available to them. The face-to-face interactions, furthermore, supported constructivism by allowing teachers to combine new knowledge with personal experiences to resolve a situation or problem. Included in this approach were opportunities for teachers to develop new activities, materials, and technologies. The role of the constructivist trainer was to serve as a consultant and resource by guiding participants to develop answers to their own learning or teaching situation (Torp & Sage, 2002).

During each year's in-service training, the face-to-face constructivist approach manifested itself though the development of a shared understanding of concepts and definitions, sharing of professional and personal experiences, prioritizing of issues to problem-solve, imbedding choices to problem-solve, brainstorming, collaborative problem-solving, and delineating of action plans.

Cross-cultural considerations

The second concern related to issues of cultural sensitivity that can enhance or impair the effectiveness of training provided by U.S. educators in a very different society. In a review of the research literature that were published in the last 25 years, Littrell, Salas, Hess, Paley, and Riedel (2006) summarized several components as being critical to "increase the likelihood" (p. 367) of the success of training that is provided in a host country. The components were (a) personal adjustment, (b) professional effectiveness, and (c) interpersonal adjustment.

Personal adjustment. This referred to the visiting trainer's ability to adjust psychological-based perceptions and responses in the contexts of differing cultures. A more successful trainer was one who was better able to (a) attribute and interpret behaviors in a similar manner to the people in the host country and (b) adjust her or his emotions, feelings,

and unconscious responses (Befus, 1988; Bennett, 1986; Bhawuk, 2001). It was also hypothesized that a person with a greater or more in-depth understanding of her or his own culture might be better able to make personal adjustments in different cultures (Befus, 1988; Bennett, 1986).

Professional effectiveness. This aspect referred to the performance of the trainer in providing training on discipline-related topics. Bennet, Aston, and Colquhoun (2000) suggested that the effectiveness of the cross-cultural trainer be measured for the purpose of quality assurance. Feedback about the trainer or training would helpful in guiding future program improvements and development.

Interpersonal adjustment. This type of adjustment was facilitated through direct and real cultural experiences and interactions (Gunesch, 2004; Morris & Robie, 2001). Experiences and interactions which helped trainers learn about common courtesies, pragmatics of the host language, and culture in general may assist in enhancing the training that was to be provided (Ashamalla & Crocitto, 1997; Gudyskunst, Guzley, & Hammer, 1996).

These cross-cultural aspects manifested in the Belize training program in multiple ways. One, the face-to-face format and constructivist method of instruction facilitated U.S. educators' understanding of cultural contexts through the open dialogues with the teachers themselves. The open dialogues helped shape meaningful teacher training experiences. Planning consultations with Belizean officials about the general design of the training events and the selection of the most qualified U.S. trainers, too, facilitated cross-cultural understanding. Two, the trainers received information about Belizean history and culture, and prior to the start of each year's in-service program, the trainers were engaged in activities that promoted personal and interpersonal adjustment. As recommended in the cross-cultural training literature, the U.S. educators underwent an interpersonal adjustment period, albeit short. The U.S. educators usually arrived at least two days in advance of the in-service training in order to tour and learn about the country and its people. There were opportunities in the evenings, too, for the U.S. educators to interact with Belizeans at markets, shops, eateries, social club meetings, and dancing halls. And three, conversations among the trainers themselves helped highlight important observations and experiences, raise awareness when questions were asked, share ideas, discuss the best possible range of teaching and learning approaches, and make collective decisions about the curriculum.

Imbedded in the program's continuous improvement model, it was also usual for the U.S. educators to call or consult with Belizean officials and teachers about each day's training or cultural observations. Many of these consultations occurred over meals, at local restaurants, or at the homes of the Belizean officials or teachers. The U.S. educators demonstrated great appreciation, diplomacy, regard or politeness, and respect during these consultations and social events, being careful of not making assumptions or judgments.

Critical components related to both the recommended instructional approaches and cross-cultural considerations were also imbedded in the development and improvement of data collection and procedures.

EVALUATION

The evaluation piece of the project constituted a mixture of quantitative and qualitative methodologies. The quantitative design was a same-sample pre/post design (with an intervention), while the qualitative design consisted of a systematic self-critical inquiry approach (Hendricks, 2009). Both methods were used to examine and improve the training's instructional content and delivery, as well as the program's overall effectiveness.

Individual reflections, small group discussions, and large group dialogues were the primary formats of providing continuous improvement information. Both Belizean teachers and U.S. educators were the primary sources of the formative inquiry data. Additionally, a reflection-on-action approach was used after delivering training. At the end of each training day, both teachers and trainers reflected on the training provided. The teachers reflected on how they might use ideas obtained from the training to improve instruction or relationships. And then the trainers, acting as researchers, deliberated extensively upon the teachers' feedback in order to make appropriate modifications in the next day's training. For summative evaluation, a survey was developed to obtain quantitative data as well as anonymous qualitative comments. Overall, the combination of above-mentioned methods constituted the evaluation approach of the project.

Participants and Settings

U.S. educators. Three university professors, with doctoral degrees in special education, participated as trainers in all three years of project. In Years 1 and 2 (2003 and 2004, respectively), a Belizean doctoral student in special education at a U.S. university also served as a member on the team of U.S. educators. A school administrator, a school psychologist, four other professors, and three graduate students pursuing Master's degrees were other trainers from the U.S during one of the years. All together, the educators came from the eastern one-half of the United States, representing ten different states or educational institutions (see Table 1 for a description of the team membership and individual roles). All of the U.S. educators participated in the program voluntarily, paid for out of their own expenses, and received no compensation from the Belizean government.

Belizean teachers. According to Belizean officials, training sites were selected in order to provide the greatest access to the greatest number of teachers. For travel to the training sites, the majority of teachers used public buses

Table 1: *Description and Role of U.S. Educators (Years 1 to 3)*

Year	Membership and Characteristic	Role(s)
Year 1 (2003)	University Professor A (first author) Male, Asian descent	Principle program organizer, guardian of general safety, convener of curriculum and evaluation meetings, curriculum developer, lead presenter, discussion facilitator
	University Professor B Female, Caucasian	Curriculum developer, lead presenter, discussion facilitator
	University Professor C Male, Hispanic descent	Curriculum developer, lead presenter, discussion facilitator
	University Professor D Female, Caucasian	Curriculum developer, lead presenter, discussion facilitator
	School Administrator Female, Caucasian	Curriculum developer, lead presenter, discussion facilitator
	School Psychologist Female, Caucasian	Curriculum developer, lead presenter, discussion facilitator
	Doctoral Student (native of Belize) Female, African descent	Curriculum developer, lead presenter, discussion facilitator
	Graduate Student A (Master's) Female, Caucasian	Curriculum developer, discussion facilitator
Year 2 (2004)	University Professor A (first author) Male, Asian descent	Principle program organizer, guardian of general safety, convener of curriculum and evaluation meetings, curriculum developer, lead presenter, discussion facilitator
	University Professor B Female, Caucasian	Curriculum developer, lead presenter, discussion facilitator
	University Professor C Male, Hispanic descent	Curriculum developer, lead presenter, discussion facilitator
	Doctoral Student (native of Belize) Female, African descent	Curriculum developer, lead presenter, discussion facilitator
	Graduate Student B (Master's) Female, Caucasian	Curriculum developer, discussion facilitator
	Graduate Student C (Master's) Female, Caucasian	Curriculum developer, discussion facilitator
Year 3 (2005)	University Professor A (first author) Male, Asian descent	Principle program organizer, guardian of general safety, convener of curriculum and evaluation meetings, curriculum developer, lead presenter, discussion facilitator
	University Professor B Female, Caucasian	Curriculum developer, lead presenter, discussion facilitator
	University Professor C Male, Hispanic descent	Curriculum developer, lead presenter, discussion facilitator
	University Professor E Female, Caucasian	Curriculum developer, lead presenter, discussion facilitator
	University Professor F Female, Caucasian	Curriculum developer, lead presenter, discussion facilitator
	University Professor G Male, Caucasian	Curriculum developer, lead presenter, discussion facilitator

as their primary mode of transportation, with some teachers traveling by bus as much as two hours. Conversations with school officials at the training sites later revealed that participation in the training was compulsory and part of a two-week long in-service education.

The participants of the in-service training were from diverse socio-cultural and geographical backgrounds. They mirrored the diverse ethnic make-up of the Belizean population and represented the most populated regions of Belize. The majority of the teachers were females, at about 94% of the total number of participating teachers. A total of 95 individuals (unduplicated) participated in the three-year in-service training. A breakdown of the teacher groups is described in the following sections.

Group A. In August 2003, the first group to receive training consisted of 28 primary and secondary education teachers from the northern district of Corozal near the Mexican border. The majority of the teachers were Mestizo (mixed heritage backgrounds of Spanish and African or Mayan). A smaller proportion of the teachers were direct African and Mayan descendents. The majority of the teachers spoke both English and Spanish languages. Several others spoke three or more languages, including Creole and/or Mayan. The in-service training was delivered in a classroom at an educational administrative center in Corozal Town.

Group B. The second group to receive training consisted of 36 primary and secondary school teachers from the central Belize community near the Caribbean Sea called Dandriga. Most of the teachers were Garifuna (or Garinagu), a mixed descendent of African and Caribbean cultures. The majority of the teachers spoke both English and Garifuna. A handful of teachers were also proficient speakers of the Spanish language. Held in August 2004, the training for the group took place in a classroom at an educational academy in the town of Dandriga.

Group C. The third cohort consisted of 31 special education teachers from special schools all across Belize. The majority of the teachers from this group were African descendents, followed by Mestizo and Garifuna. English was widely spoken by this group of teachers. Most also spoke other indigenous languages, including Creole, Spanish, Garifuna, and Maya (in order of descending numbers). The site for August 2005 training was a classroom at a special school in Belize City.

The pragmatics of the English language spoken by the U.S. educators, as well as the multiple languages and non-verbal communication styles of Belizeans, were noted as an issue prior to each year's training, as a result of the pre-training cultural experiences and direct interactions with Belizeans in the community. The team brainstormed possible resolutions to this matter, including avoiding technical jargon, encouraging teachers to ask questions

if something was not understood, asking teachers for clarification, asking teachers to help each other in understanding the material presented, and inviting or initiating individual consultations with teachers or school officials as needed to prevent misunderstandings or establish common understandings. Gestures and body movements that conveyed communication, too, were discussed and clarified. As a point of example, a lack in the teachers' reciprocity to the U.S. trainer's questions did not mean that the teachers were not interested in dialogue. After asking school officials and the teachers themselves during breaks and other informal times, the U.S. trainers learned that a combination of reverence to the presenters and previous "didactic" based experiences were primary reasons for the teachers' quiet behaviors. Once the U.S. educators explained that interruptions and lively discussions were permissible, the tone of the training took a 180-degree turn and was noted in the teachers' evaluation comments as being an extremely positive aspect of the training.

CURRICULUM DESIGN

Based on input provided by Belizean education officials, a four-day face-to-face in-service education program in special education was designed for each year of the training. Group A's training was on the topics of inclusion, communication disorders, bilingual special education, and family and community partnerships. Group B's training was on inclusion, teaching diverse learners, positive behavior support, and family and community partnerships. For Group C, the training covered intervention strategies, autism, language art strategies, and family partnerships.

Description of Topics

Over the course of the three years, nine special education topics were offered (see Table 2). The topic of *family and community partnerships* was offered every year. Family and community partnerships were described as key resources in helping improve children's outcomes. The topic of *inclusion* was presented twice and discussed as both a value and a way of life. Each of the other seven topics were offered only once.

Communication disorders focused on teaching children with communication delays or problems, while *bilingual special education* offered ideas about teaching children with disabilities who spoke languages other than English (the medium of instruction in Belize schools). *Teaching diverse learners* was about individualizing instruction for children with a range of diagnoses or learning needs, and the training on *positive behavior supports* focused on proactive techniques in encouraging children's development of new behaviors. *Intervention strategies,* meanwhile, were about practical teaching and progress measuring techniques. The training on *autism* focused on appropriate teaching techniques that aided in children's social and communicative skills development, and *language art strategies*

Table 2: *Topics of training, in order of sequence, for Years 1 to 3*

Year 1 (2003)	Year 2 (2004)	Year 3 (2005)
Inclusion	Inclusion	Intervention Strategies
Communication Disorders	Family and Community Partnerships	Language Art Strategies
Bilingual Special Education	Teaching Diverse Learners	Autism
Family and Community Partnerships	Positive Behavior Support	Family and Community Partnerships

provided hands-on experiences in utilizing fun activities to teach literacy skills.

Although the topics of *inclusion* and *family and community partnerships* were covered in two or more of the years, its specific curricular activities and experiences were different in the different years. In other words, the training on *inclusion* in 2003 cannot be compared to the *inclusion* training in 2004, even though both had the same topic titles. Lead presenters and facilitators, too, were different in the different years, as were the groups of teachers. Table 3 provides an example of the training agendas for the topic on *family and community partnerships*, illustrating the point that, while the integrity of overall design (see guiding principles below) was maintained, the micro-level activities were different.

Program Philosophy and Guiding Principles

Four features served as foundation and guide for the overall design of the training program: (1) acknowledgement of the teachers as change agents and experts; (2) collaborative problem solving by teachers; (3) action planning by teachers; and (4) continuous improvement of in-service curriculum. In other words, the training's philosophical anchor was empowerment of teachers to bring about change that they would like to see happen.

In support of the philosophical orientation and guiding principles, the daily agenda proceeded in the following general sequence: (a) introduction of the topic; (b) identification of issues and concerns; (c) collaborative action planning; and (d) evaluation of the day's teaching and learning processes and outcomes. Throughout each day, methods such as individual reflection, small and large group discussions, and other creative opportunities that allowed presentation and expression of feelings, thoughts, and ideas were provided, consistent with the philosophy and principles for the in-service program.

Daily Program

Each day of the in-service education program started at 8:30 in the morning and ended between 4:00 and 4:30 in the afternoon. One or two lead presenters from the U.S. group of

educators were selected for each day, with the remaining U.S. educators facilitating discussions with the Belizean teachers seated at clusters of tables. Each day's session was held in the same room, with short breaks built-in. Since it was a very intense program, and many of the trainees had been up early in order to travel and arrive on time, the trainers provided as much support, feedback, and encouragement as needed. For instance, prior to the start of each day's training, the U.S. educators brought snacks and drinks to share with the Belizean teachers throughout the duration of the long and hot days. Both U.S. and Belizean educators appreciated the opportunities for dialogue, friendship, and teamwork that these gestures helped create.

Facilitation provided by the U.S. educators consisted of guided questioning and provision of ideas that sparked in-depth discussions. Verbal and written feedback from the teachers was collected at the end of each day. The only exceptions were the surveys for Group C's in-service training on autism, language art strategies, and family partnerships, for which the lead presenters did not had enough time to administer. Based on this feedback, improvements in curriculum were made and shared with the Belizean teachers the following day throughout the entire four-day program. In addition to using the daily feedback in making adjustments and improvements in the curriculum, the feedback was also used to examine the effectiveness of the program.

The U.S. educators met each evening of the in-service day to reflect upon accomplishments and lessons, discuss the next day's curriculum, and assign roles and responsibilities based on interests and talents. As mentioned previously, the curriculum content for similar topics differed each year because of this design aspect, as well as the focus in directly addressing the learning needs of the teachers who were currently participating in the program.

DATA COLLECTION

Quantitative and qualitative data were collected through surveys and multiple writing opportunities responding to a range of open-ended questions, respectively.

Table 3: *Training Agendas for Family and Community Partnerships, Years 1 to 3*

Family and Community Partnerships		
Building Family and Community Involvement **Year 1 (2003)**	**Relationships and Partnerships with Families** **Year 2 (2004)**	**Working with Families and Communities** **Year 3 (2005)**
<u>Agenda</u> Review/share feedback Benefits of family and community involvement Family guest speakers Lunch break Community guest speakers Priorities for change Small group brainstorming and action planning Presentation of action plans Continuous improvement Adjourn	<u>Agenda</u> Review (comments and suggestions) Rationale for family involvement Family stories Sphere of influences Short break Reality of life for Belizean families Lunch break Empowering families Short break Write action plans Evaluation of training	<u>Agenda</u> Yesterday's feedback and connection to today's topic Role play family situations Priorities for improving relationships Strengths-based approach Lunch time Using community resources How to write action plans Time to write action plans Share action plans Evaluation activities Celebration

Instrumentation

Quantitative measure. A "retrospective" pre- and post-survey of (a) knowledge of issues or challenges, (b) knowledge of priorities, (c) skills in planning, (d) knowledge of strategies, and (e) skills in implementing goals and plans related to each day's topic was administered, completed by the teachers, and collected by the U.S. educators. The surveys were anonymous, that is, neither names of teachers nor any identifiable information was solicited.

Prior to the start of the Year 1 (2003) training, the first author drafted a copy of the survey following discussions with Belizean officials and U.S. educators. The content validity of the survey was first established by matching the survey questions with the program's guiding principles and daily training experiences. Then, several Belizean officials and all of the participating U.S. trainers from Year 1 critiqued the draft by providing feedback on the survey's format, clarity of print, directions to complete the survey, and overall appropriateness of questions. A second draft was produced, a few more adjustments made following another round of review, and a final draft of the survey finalized just prior to the start of the training program's first year. The same survey was utilized in the subsequent years.

Administered to all participating teachers at the end of the day, the teachers anonymously and individually completed a self-rating scale (e.g. "1" for "No Knowledge" to "10" for "Very Knowledgeable,") for each of the previously mentioned areas. Teachers were asked to indicate a rating for where they were at the start of the day and a rating for where they were at the end of the day. The teachers were informed that the feedback provided was voluntary, and that they may choose or not choose to answer one or more of the questions, or withdraw completely without any prejudice or harm. It was also emphasized that the teachers' feedback would be helpful in making training improvements. The information was relayed both verbally and in writing prior to the administration of the survey. A copy of the survey can be obtained by contacting the first author.

Qualitative measure. In addition to the quantitative ratings, qualitative information was collected through verbal discussions and in writing at the end of day. Using open-ended questions such as "Any suggestions?" or "What are your thoughts about today's training?" and requests such as "Please write down your personal reflections" or "Please give us feedback about today's program," the Belizean teachers were asked to comment about any or all aspects of the in-service program. The information provided was recorded in the form of charting (large group activity), notes taken down by U.S. educators, and anonymous individual teacher comments.

During evening debriefings, the trainers would discuss the comments made by teachers, clarify understanding of issues, share notes, observations and experiences; exchange ideas or make suggestions, and problem solve where needed. These debriefings incorporated several types of triangulation, including data (or source), methodological, and

investigator (Denzin & Lincoln, 1994). The notes from these debriefings served as another source of qualitative data, and aided in planning the following day's curriculum. The next morning, during the review session, the U.S. educators would check on the accuracy of their interpretations with the teachers and then respond to issues, situations, learning needs, and ideas in the most affirmative ways possible.

Over the course of the three years of the project described here, the rigor of the investigation was enhanced by time and location triangulations as well.

Analysis

Quantitative Analysis. Utilizing SPSS, the pre- and post-self-ratings were statistically analyzed using paired samples *t*-test with an intervention (or t-test for dependent or correlated means), with the confidence interval level set at 99%. The paired-samples *t*-test procedure measured whether the observed average gains in each of the five areas of self-ratings were significant. Furthermore, Pearson's correlation coefficient (*r*) were determined for each paired sample to measure the magnitude of the difference in the means.

Qualitative Analysis. The qualitative data was analyzed using a simple process of noting patterns, seeing plausibility, clustering, comparing and contrasting, counting, and labeling (Miles & Huberman, 1994). Emerging patterns were first identified, in Belize, during debriefing meetings and educators' reflections when developing the daily curriculum. The U.S. educators discussed a range of plausible themes grounded in direct experiences as well as written notes. In general, the discussions in Belize centered on various variables related to "what worked," (as a means of identifying effective strategies or processes to continue using) and "suggestions" (as a rationale to make adjustments or changes in the training approach; as well as a means to be deliberately responsive to the teachers, even when issues may be out of the control of the U.S. educators).

Once back in the U.S., all notes were transcribed into an electronic format. The two authors independently reviewed and highlighted phrases or quotes indicative of the important experiences expressed by Belizean teachers. Still working independently, the investigators then assigned the phrases and quotes into similar clusters, which were later labeled with short titles after each was satisfied with their partitions.

Both researchers then shared and explained their themes, compared and contrasted their thoughts and evidence for the patterns, and corroborated in the identification of a final set of themes and sub-themes. The corroboration involved the integration of similar ideas, development of new clusters (or partitions), and discussion about theme titles or labels that more truly represented the comments made by the Belizean teachers. The comparing and contrasting processes, at the same time, led to greater accuracy, clarity, and definition of the evidence that supported the themes. A tally of the comments that supported each theme was then made, followed by a determination of each theme's magnitude based on the number of comments supporting it.

RESULTS

Quantitative Outcomes

Differences in mean averages before and after in-service education. As can be seen in Table 4, the Belizean teachers reported statistically significant increases in their level of knowledge and skills across all topics and areas. Deductively speaking, the overall program model can be attributed as having influenced the positive change in the teachers' level of knowledge and skills development. The validity of the training model's effectiveness, furthermore, is demonstrated by the similar positive and statistically significant findings, in two or more of the years, on the topics on *inclusion* (Years 1 and 2) and *family and community partnerships* in Years 1, 2, and 3. The correlations of all paired samples ranged from .79 to .93, indicating significant strength in the score differences before and after training.

Qualitative Outcomes

Teachers' anonymous feedback, large group discussions, notes from debriefing meetings, along with corroboration from the second author, helped shape the qualitative findings into organized themes and sub-themes. Prior to the final consensus, the investigators independently partitioned the qualitative data (see Table 5). Towards the end of the process, a total of 627 comments or quotes were clustered into 14 sub-themes, with nine sub-themes describing the "strengths" of the training model, and the rest providing "suggestions" for changes or improvements that may be useful.

The strengths of the in-service training ranged from enhanced professional knowledge and skills, such as "becoming agents of change" and "change in personal dispositions," to enthusiastic remarks about the training itself, such as "safe, learning climate" and "expertise of the U.S. trainers." The suggestions for improvement, on the other hand, clustered around resource issues, requests to meet personal needs, and ideas for future training improvements. (See Table 6 for a list of the sub-themes and examples of comments supporting the themes).

DISCUSSION

In summary, the majority of sentiments noted positive experiences and impacts. Seen together with the teachers' self-ratings, the success of the training program can be attributed to its philosophy and guiding principles, the facilitation that was provided, and the ongoing evaluations that occurred to check about its effectiveness.

Table 4: *Effectiveness of Training: Quantitative Findings*

Topics	M difference	df	t	r
Year 1 (2003), Corozal Town				
Inclusion				
Knowledge about issues or challenges	3.95	20	7.69*	.86
Knowledge about priorities	3.76	20	8.74*	.89
Knowledge and skills in planning	3.82	20	7.27*	.85
Knowledge of strategies	4.23	20	7.96*	.87
Knowledge and skills in implementing	4.10	20	7.48*	.86
Bilingual Special Education				
Knowledge about issues or challenges	4.10	20	8.47*	.88
Knowledge about priorities	3.95	20	8.06*	.87
Knowledge and skills in planning	3.34	20	5.72*	.79
Knowledge of strategies	3.76	20	6.99*	.84
Knowledge and skills in implementing	3.81	20	6.57*	.83
Communication Disorders				
Knowledge about issues or challenges	3.71	21	8.76*	.88
Knowledge about priorities	3.67	21	8.73*	.88
Knowledge and skills in planning	3.54	21	8.97*	.88
Knowledge of strategies	3.58	21	8.88*	.88
Knowledge and skills in implementing	3.71	21	7.92*	.85
Family and Community Partnerships				
Knowledge about issues or challenges	3.73	23	7.63*	.86
Knowledge about priorities	3.50	23	7.62*	.86
Knowledge and skills in planning	3.70	23	7.17*	.84
Knowledge of strategies	3.68	23	6.13*	.80
Knowledge and skills in implementing	3.55	23	6.28*	.81
Year 2 (2004), Dandriga Town				
Inclusion				
Knowledge about issues or challenges	3.77	31	8.55*	.84
Knowledge about priorities	2.06	31	9.30*	.86
Knowledge and skills in planning	3.71	31	8.20*	.83
Knowledge of strategies	4.13	31	8.62*	.84
Knowledge and skills in implementing	3.81	31	7.81*	.81
Family and Community Partnerships				
Knowledge about issues or challenges	3.64	32	10.26*	.88
Knowledge about priorities	3.51	32	10.19*	.87
Knowledge and skills in planning	3.67	32	9.04*	.85
Knowledge of strategies	3.62	32	8.03*	.82
Knowledge and skills in implementing	3.50	32	8.36*	.83
Teaching Diverse Learners				
Knowledge about issues or challenges	3.93	30	12.95*	.92
Knowledge about priorities	3.51	30	10.84*	.89
Knowledge and skills in planning	3.87	30	10.14*	.88
Knowledge of strategies	3.61	30	8.89*	.85
Knowledge and skills in implementing	3.52	30	9.20*	.86
Positive Behavior Support				
Knowledge about issues or challenges	3.97	32	10.87*	.89
Knowledge about priorities	3.48	32	10.50*	.88
Knowledge and skills in planning	3.67	32	9.26*	.85
Knowledge of strategies	3.64	32	8.58*	.83
Knowledge and skills in implementing	4.12	32	9.63*	.86
Year 3 (2005), Belize City				
Intervention Strategies				
Knowledge about issues or challenges	4.44	24	12.80*	.93
Knowledge about priorities	4.00	24	11.88*	.92
Knowledge and skills in planning	4.12	24	10.16*	.90
Knowledge of strategies	4.12	24	9.68*	.89
Knowledge and skills in implementing	4.24	24	10.79*	.91

*p < .001

Table 5: *Qualitative analysis: Themes independently identified by the investigators*

First author	Second author
What worked	
Attitudes changed	New knowledge
Sense of personal responsibility	Family and Community impact
Training itself – handouts, format, climate	School impact
Expertise of U.S. educators	Food
Appreciation for U.S. educators being there	Attitude
Greater knowledge	Materials
Improved skills	Training format
Need to better communicate with families and communities	Self-evaluation
Suggestions	
Include more discussion time	Training expertise
Need more teaching materials	Gratitude
Training to deal with students' behavior problems	Communication
Change daily schedule	Networking
Issues with lunch breaks	

The suggestions made by the Belizean teachers were addressed in ways that were most constructive. On the issue of daily schedule, as it was not possible to change the start and end times of the in-service days, the trainers had discussions with the teachers and made accommodations in other different ways. The trainers agreed that it was all right for some teachers to either arrive late or depart early to catch the last bus to their homes. Transportation problems were also related to the issue of lunch breaks. Three creative solutions were offered: One, that it was alright for teachers to bring food and drink to class in order to save time and avoid walking the distances to restaurants and convenience stores; two, after consultations with the education officials, a longer lunch break was offered on selected days; and three, on a few occasions, sellers of food, snack, and drink were brought on the premises at the invitation of the officials, which the teachers appreciated.

The U.S. educators found several solutions to provide more time for small and large group discussions. Among the solutions were reducing lectures, asking more questions, and using facilitation techniques that actively engaged the Belizean teachers. The U.S. educators, however, were not able to provide more resource materials other than what was brought. This situation turned out to be an opportunity to discuss alternatives and ways of seeking local supports.

Teachers at all of the training events raised the issue of children's behaviors problems. In particular, student truancy and physical aggression were identified as being some of the more pervasive challenges at schools, including special schools. Upon further inquiries by the U.S. educators, the Belizean teachers suggested that future in-service programs include this topic in order to assist them in discussing and problem-solving behavioral issues of students. In Years 2 and 3, the topics of *positive behavior support* and *intervention*

strategies, respectively, were offered in response to the requests. The training on *autism*, too, was provided in Year 3 as a result of teacher comments in the previous years. Clearly, however, based on teacher comments from Year 3, a greater amount of time and more in-depth training needs to be dedicated in assisting the Belizean teachers address challenges related to behaviors of students.

Implications

Language and intent of policy. In-service education must be responsive to local needs. Policies, either at the local school levels or at the highest international levels, could reflect this as its philosophical or practical foundation, or both, for any training programs. In this project, the Belize special education in-service program was developed to meet a need articulated by education officials and private citizens. The program "has literally assisted the Special Education Unit to execute the mandate to facilitate the development of special training programs," meeting a national policy mandate that is frequently "a daunting one in that the Unit has inadequate staffing capacity and inadequate support to achieve this goal to a satisfactory standard of achievement" (Geraldine Holland, Special Education Unit Coordinator, personal communication, August 29, 2003).

Training design. Policy and calls for training notwithstanding, the design of in-service program must be an important consideration, with due regard for circumstances in schools (e.g., diversity of students, availability of teaching tools and adaptive equipment, student-teacher ratios) and socio-cultural conditions of society (e.g., perceptions of disabilities, access to services, employment opportunities, work conditions for teachers and others). In Belize, a curriculum built upon the experiences of the teachers, and which encouraged the teachers to be resourceful within a

Table 6: *Themes and sub-themes, in order of its magnitude*

Theme 1: Strengths of the Training Model	
New knowledge and skills	"If I cannot help at the moment, I will contact resource persons who can."
Becoming agents of change	"Now you've made me aware and enthusiastic about taking the information back to my principal."
Change in personal dispositions	"I will have more patience, be more sensitive, show more love and understand certain needs."
Expertise of the U.S. trainers	"The techniques and strategies used were very or highly professional. In no instance I felt bored with no facilitator."
Thankful for training	"Throughout these four days I have benefited a lot. Everything was great."
Safe learning climate	"First of all I would like to say that I am very grateful to you, our facilitators, for making me feel at home."
Format of training	"Role plays of each group gave me new ideas, ways to deal with different situations."
Networking opportunities	"I had a chance to make contact with other teachers who would help to make my work more effective."
Self-evaluation of teaching practice	"I was busy at school trying to teach children, leaving the slow ones behind… I ignored some who may have needed my help… I did not know what the problem was, and how to deal with it, so I was frustrated."
Theme 2: Suggestions for Improvement	
More small and large group discussion	"The discussion among small and large groups benefited a lot… I would like more of these."
In need of basic amenities and teaching tools	"Bring us writing paper and pens and pencils"
Teaching children with behavior problems	"More workshops on autism would be beneficial."
Lunch breaks	"Find someone to sell fruits and snacks."
Schedule change due to transportation problems	"Start later since we take the bus for two hours."

difficult context was designed. The U.S. educators also came prepared with paper materials (e.g., poster paper, sticky notepads, notebooks for teachers), writing utensils (e.g., pens, pencils, markers), handouts, visual aids, masking tapes, and other useful items that assisted participants in learning and reduced in-service related costs for the local education agency organizing the event. For in-service education to be effective anywhere, teachers' experiences must be regarded as strengths and serve as basis for in-depth reflection and discussion. Resources and aids should be made available to facilitate processing of information and learning.

From rhetoric to action. In addition to reflecting and discussing, the findings of this study have highlighted the importance of action planning. By the end of the week, the participating Belizean teachers were capable of creating action plans that highlighted their top priority, specifying changes they wanted to see in a particular area, and most importantly identifying steps or actions they needed to take to improve the issue. Acknowledging and promoting the teachers' roles as change agents and experts were powerful means to assisting the teachers in feeling appreciated and empowered. By discussing the value of, and the need to improve, relationships with family and community social systems, the teachers further expressed understanding of the greater impact on children's education and outcomes as well as greater desire to reach out and establish better communication and partnership with families and community members. These elements of in-service education may be suggested for training anywhere, especially in

assisting teachers become informed about available community resources and social services, and providers of social support.

Trainers and teamwork. In Belize, the U.S. facilitators were careful to step back during the training in an effort to ensure that issues and solutions originated from the teachers. In turn, the facilitators experienced empowerment as they watched participants become proficient in action planning. As well as Belizean teachers, the U.S. facilitators experienced the power of continuous improvement as they engaged in a cycle of planning, acting, observing and reflecting. This was evident as each session built on the previous day's experience. Facilitators worked as a team, established goals, collected data, and adjusted their actions accordingly. Overall, facilitators noted a deep satisfaction in participating in the special education in-service program. Trainers on other projects may benefit by adopting this approach of facilitation and reflection in order to best support similar groups of teachers meet their own learning needs.

Common learning needs. Through discussions soliciting feedback to improve both the curriculum and the program, the Belizean teachers requested in-service education on the topic of challenging behaviors of students, not unlike teachers in the United States who have cited challenging behaviors as a major concern and reason for leaving the teaching profession (Smith, Polloway, Patton, & Dowdy, 2001). The topics of *positive behavior support*, proactive *intervention strategies,* and *autism* were incorporated in 2004 and 2005 in response to the articulated need. Training on topics such as these could be emphasized at international forums or conferences where there is participation of service providers from many parts of the globe. The discourse at such events could lead to the formation of new partnerships and innovations or help bring about needed change.

Limitations and Recommendations

Training follow-up. A limitation in the design of the program is follow-up contact with the teachers. While immediate benefits to participants have been documented, the impact of the in-service beyond the four-day in-service is not known. Follow-up questionnaires or interviews may be options. Additionally, teachers and education officials should be engaged in discussions about procedures for collecting the follow-up information to ensure appropriateness and participation. The follow-up questions should relate to purposes of the in-service education, namely, in this case, the teachers' roles as change agents and resource persons, use of problem solving through collaboration, and use of action planning as means to setting goals and delineation of steps to achieving the goals.

Lessons for trainers. Another recommendation is to document the processes of engagement and the learning experiences of U.S. educators (i.e., personal and interpersonal adjustment). Comments such as "I realized my role was to help the teachers discover, not just listen to what I have to say," offer important insights when interacting with teachers from different economic and socio-cultural backgrounds. Journal notes, written notes of group discussions, and daily written feedback are possible methods. When disseminated through written work or presentations, lessons from these experiences would add new perspectives about cross-cultural training.

Generalizability. Caution must be taken about the generalizability of the Belize training model and its findings to other groups of teachers. Significant differences may manifest in areas such planning and organizing the training program, language of instruction and two-way communication, and socio-cultural beliefs and practices. While components of the training model (e.g., empowerment approach, constructivist method of engagement) may be adopted, it must be deliberated carefully and implemented with flexibility and tact

CONCLUSION

The in-service program provided a learning climate that encouraged discussion about educational change, practice in collaborative problem solving, and plan writing. Many of the Belizean teachers expressed both personal satisfaction and professional growth, in addition to the highlighting the effectiveness of the program. While these sentiments serve to inspire the U.S. educators to continue organizing and delivering the in-service program, improvements may be made in the design of the program. Documentation of cross-cultural experiences and studies on the long-term impact of the program are possibilities.

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