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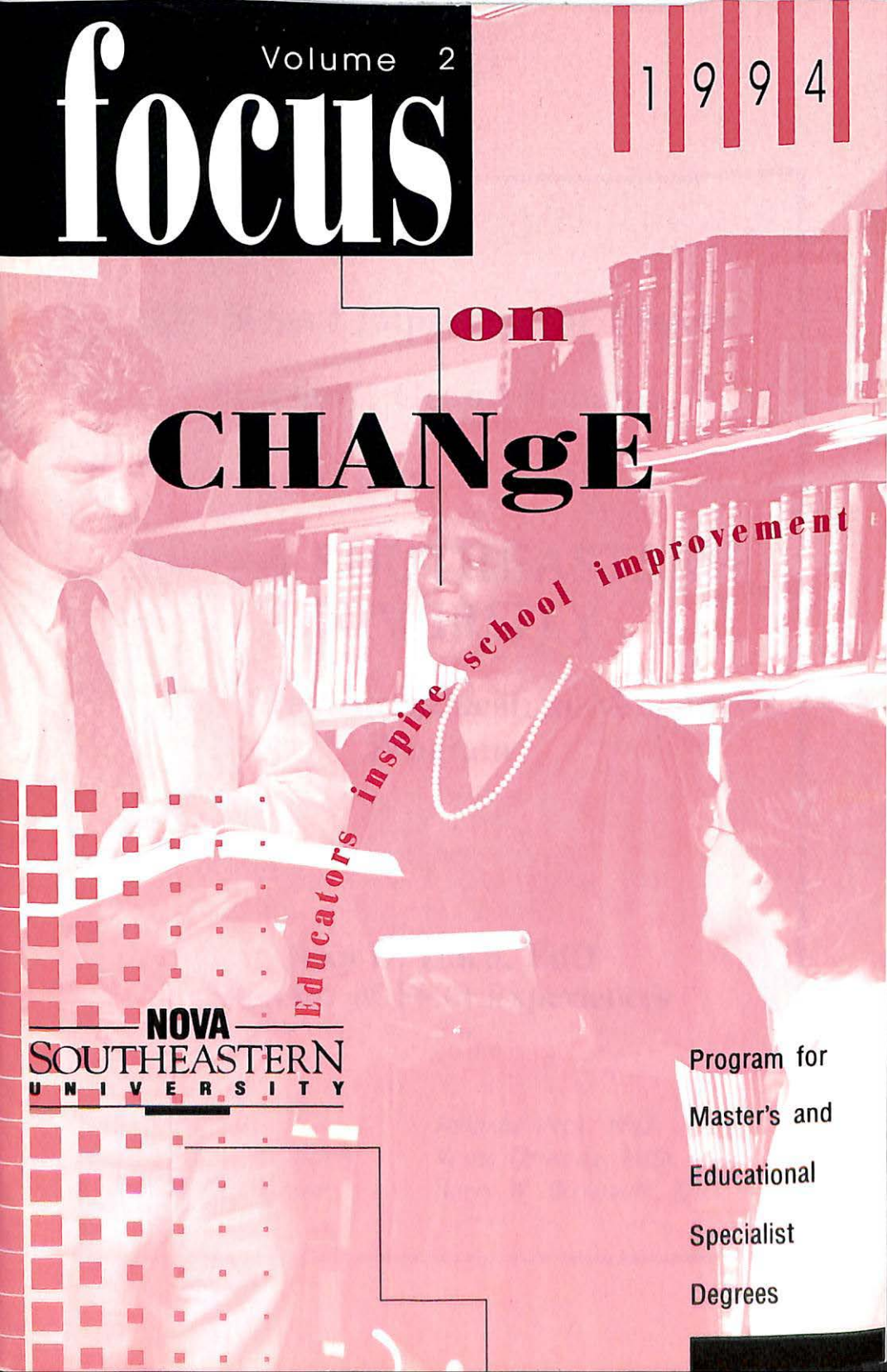
Educators inspire school improvement



NOVA SOUTHEASTERN UNIVERSITY

Program for Master's and Educational Specialist Degrees

focus on change, Vol. 2

1993 School Improvement Projects

Freeport, Grand Bahama

NOVA SOUTHEASTERN UNIVERSITY

The Graduate Education Module Program

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Message From the Dean

Research on school improvement indicates that teachers are the key for bringing about positive change in student performance. The impetus for school change comes from an array of sources (federal government, state departments of education, big business) that ignore the special capacities of teachers to improve the schools.

The school improvement projects summarized in this publication demonstrate teachers' impact in schools throughout Grand Bahama. Nova Southeastern has in its mission statement the goal to disseminate teachers' school improvement strategies through this publication and the national dissemination network, ERIC (Educational Resource Information Center). More than 1200 practicums completed by Nova Southeastern students are included in the ERIC collection. The practicums reviewed in this volume can be obtained by contacting the Einstein Library at Nova Southeastern University. We would be pleased if you adapted and adopted these school improvement strategies in your environments.

Richard Goldman, PhD
Dean
Fischler Center for the Advancement of Education

Message From the Program Director

Among the qualities that the GEM Program hopes to instill in its graduate students are:

- the ability to base classroom practice on current professional literature;
- a proactive approach toward identifying needs and problems in a school setting; and
- the use of systematic problem-solving and evaluation processes to address educational problems.

More than 1,000 GEM practicums are completed every year in Arizona, Florida, and Nevada. Those affected by each intervention range from a few exceptional education students to multiple classrooms or an entire school program. The nature of these interventions is illustrated by the school improvement projects in this volume. Supporting our students as they make a difference in the schools is one of the most gratifying tasks of the faculty and administration of the GEM Program.

Johanne Peck, PhD
Director
GEM Programs

GEM Students as Change Agents

Educators everywhere are concerned about the changes that need to be made in education. Among these concerns are successful completion of basic education for everyone, redesigning school programs to meet emergent needs of society, and training teachers in the use of technology. Teachers in public and private schools have vested interest in addressing these needs. Educators in the community and in industry strive to provide effective employee training and to establish programs that profit their companies.

The projects reviewed in this volume represent outstanding practice on Grand Bahama. GEM program professors served as advisors for these projects. All of these projects have had significant impact in their settings. I am pleased to present their findings in ***FOCUS.***

Joan D. Horn, EdD
Director of Field Experiences

Understanding the Practicum Internship

The practicum is an action research project each Graduate Education Module (GEM) student implements to complete the master's or educational specialist degree. The purpose of a practicum is to provide a unique solution to a significant education-related problem related to a student's major.

The Practicum Internship involves the student in a collaborative effort with a Nova Southeastern practicum advisor, a local mentor, and with other professionals in the internship setting. GEM students, as authors, design strategies to address problems or situations that need improvement in the classroom or in school practice. Measurement of resulting changes is important for evaluation of the projects.

The reader of this volume should keep in mind that each project implementation herein was unique at the practicum site. Recommendations of the authors for future uses of the projects are included in the reviews.

Vesna Ostertag, EdD
Professor of Research

Contents:

Achievement

Computer-Assisted Instruction

Gwendoline Bagot, a teacher of mathematics for grades 7-12 at Eight Mile Rock High School, Freeport, found that a high percentage of tenth-grade students were not performing at grade level in mathematics. Based on recommendations of Seifert (1983) and Dessart and Suydam (1988), a program using computers, work centers, and resource stations was designed to change the learning environment. The computer lab was used extensively to assist the students during math class. Even though a fire destroyed the computer lab part way through the implementation, Bagot was able to adapt the curriculum to continue the project. Various games, simulations, and the use of calculators, were integrated into the creative alternate delivery system.

The results of the practicum were positive. The students' academic levels, self-esteem, motivation, and the desire to learn increased. Students learned to effectively use computer technology and calculators in solving mathematical problems. Students' posttest scores showed significant gains. Based upon the results of the project, it was recommended that students begin learning how to use calculators prior to tenth grade, and that computer technology be incorporated into math classes on a continuing basis.

Advisor: Dr. Dennis Murphy

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Multiplication Tables

Geleta Turnquist, a teacher at Walker Parker Primary School, worked with third-grade students who were having difficulty in mastering multiplication. Over 90% of the students were scoring below 40% on math tests. Many students were accustomed to counting on their fingers, thus making computation difficult when using multiplication. As recommended by Mattingly and Bott (1990), students learned their multiplication tables by using physical activities such as jumping and clapping, as well as using the chalk board in new creative ways.

Cooperative learning activities offered the students opportunities to work together. In addition, peer networks provided support systems. The most important component of the program was the sequential, direct approach to instruction.

The creative techniques incorporated into the curriculum challenged the children and increased their interest in learning. The posttest results showed a tremendous increase in factual and conceptual knowledge of mathematics among the targeted students.

Turnquist recommended that teachers adopt creative strategies that meet the learning needs of students and provide strong and consistent math programs modeled on this project.

Advisor: Dr. Ronald Hirst

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Listening Skills

Hazel Burke, a language arts teacher at Grand Bahama Catholic High School, worked with seventh-grade students who were suspected of being learning disabled. She found that these students, in particular, had problems in listening comprehension skills. The importance of listening as a component of learning was clearly delineated as a deficiency among the target group members.

Burke developed an implementation strategy based on McDevitt's (1990) recommendations to use listening instruction. Methods included modeling, listening tapes, and story telling. Verbalization and paper and pencil tasks were also incorporated to address critical thinking skills, decoding, and fact and opinion questions. A motivation reinforcement plan already in use at the school was also incorporated into the program.

The results of the practicum exceeded expectations in that all students increased their scores on the posttest. While it was first thought that the degree of disability of the targeted students was extensive, it was found that the youngsters improved in all areas of academics due to their improved listening skills. Burke recommended that a seminar be conducted for language arts teachers at the beginning of the school year in order to acquaint them with strategies and materials for use with students who need to increase listening skills.

Advisor: Dr. Sidi Lakhdar

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Comprehension Skills

Tamar Spence, a teacher at Grand Bahama Catholic High School, sought to increase the literal and interpretive comprehension skills of 10 fifth-grade students enrolled in social studies classes. Many of these students were thought to be learning disabled. Program objectives were to improve recognition of main idea, recognition of cause and effect relationships, and recall of facts. The design of the program was based on the premise that understanding reading requires sequential skills that build upon one another. Through the use of a reward system, graphic organizers, and the SQ3R (survey, question, read, restate, review) study method, students were able to increase their literal and interpretive comprehension scores.

All 14 students achieved increases in the areas of literal and interpretive comprehension at the end of the practicum. The use of the reward system, in which students received positive reinforcement for correct answers, was considered the main reason for the success of the practicum. Spence recommended that content area teachers emphasize reading comprehension skills in

the subjects they teach in order to prevent a high rate of failure among students in the third streams.

Advisor: Dr. Sidi Lakhdar

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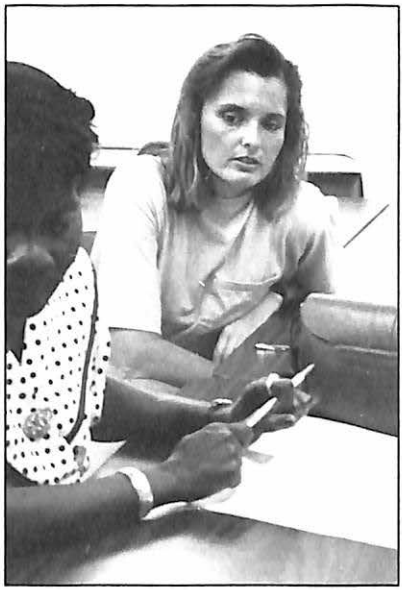
Writing Skills



Jane Dark, a second-grade teacher at Sunland Lutheran School, found that the elementary students who were thought to be learning disabled had poor fundamental writing skills. Many of the students had problems with letter formation, spelling, sentence construction, and written expression.

Based on Thomas, Englert and Gregg's (1987) recommendation to provide a systematic program to address the varied writing problems of learning disabled students, Dark designed a program that included the use of computers, cooperative learning, journal writing, word processing, student-teacher conferences, and writing for a real audience. Four regular classroom teachers and one computer teacher were trained to implement the creative strategies with 10 second, third, and fourth-grade students. Students were given opportunities to work with peers, while receiving support from the participating faculty.

Posttest scores showed that all 10 students increased their written language skills. There were also increases in the students' self-esteem. Recommendations for future use of this project included a writing-techniques workshop for teachers at the beginning of the school year and a workshop to acquaint parents with current writing strategies.

Advisor: Dr. Joan Horn

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Inquiry-Based Program

High school students enrolled in ninth grade science classes were performing below grade level at Hawksbill High School. Teacher ***William Bagot*** believed that this was a serious problem because of the importance of science as an academic subject. Bagot documented that 22 students who earned "Ds" and "Fs" in eighth grade were still earning low grades in the first semester of ninth grade science. From task analysis, Bagot reshaped the curriculum to better meet the needs of the students.

Bagot guided students through the exploration of various elements of science by using the inquiry-based process and hands-on activities. Lessons concluded with consensus building strategies, as proposed by Norris (1988).

It was found that the students' scores collected from the hands-on activities during implementation were far higher than those scores obtained on the teacher-made tests obtained before implementation. Bagot proposed that science teachers provide special activities for low achievers, incorporate hands-on tasks, and use alternative assessment procedures beginning as early as ninth grade.

Advisor: Dr. Dennis Murphy

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Leisure Reading

Geraldine Wildgoose, a teacher at Eight Mile Rock High School, found that many high school students did not read for pleasure or for leisure. Following the suggestions of Hicks (1991), Wildgoose introduced cooperative learning as a central component of the program. Sustained silent reading periods, read-aloud sessions, a classroom library, magazines, novels, computers, and cooperative learning strategies to change the students' attitudes toward leisure reading were also incorporated into the project.

The interaction and peer support that were created in the cooperative learning environment had the most positive impact upon the students' success. The changes in the students' attitudes toward reading following implementation of the project were clear. Students showed increased interest in reading materials outside of those required by the classroom teacher.

Wildgoose proposed that this project be used by homeroom teachers and that it be integrated into standard classroom instruction. Adaptation of the program at the elementary and secondary levels was recommended.

Adviser: Dr. Wilma Robles de Melendez

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Mathematics Achievement

Marjorie Nelson, teaching at Grand Bahama High School, identified 10 third-stream students who were achieving below the school's required minimum grade of "C" in geometry. Objectives were to increase the target group's skills, raise report card grades, and increase motivation to succeed.

The selected solution strategies were influenced by Olive (1991), who examined the Structure of Observed Learning Outcomes Taxonomy (SOLO). Nelson, with the computer teacher, integrated this concept with computer-assisted instruction (CAI) and direct instruction during the 12-week project. Exploratory exercises using hands-on activities were added to foster discovery.

Results were that 9 of the 10 target group students increased grades to at least "C." There was an increase of 30% in motivation to complete geometry test questions. Recommendations for future use were that serious consideration be given to this method for general teaching of geometry. A recommendation was received by Nelson for the project's use in other mathematics classes.

Advisor: Dr. Dennis Murphy

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Program Development

Science Curriculum

At Eight Mile Rock High School, ***Princess Fawkes,*** a science teacher and the head of the science department, found that the secondary science curriculum and textbooks did not meet the needs of the students. The objective was to create a teacher-developed text containing all areas of the curriculum and using all six levels of the cognitive domain. The text was targeted to the fifth grade readability level.

Fawkes based the program design on the work of Osborn, Jones, and Stein (1985) who believed that improving educators' textbook assessment skills to be essential to improvement of instruction. As the first part of the practicum, eight seventh-grade teachers and Fawkes implemented a curriculum review program that, in the first phase, included critiques of the schematic design of the science textbooks; the evaluation of the visuals, content, suggested activities, and review questions; and the reading levels of the texts. During the second part of the project, teachers produced instructional materials on science topics that were more relevant and meaningful to students.

During the final phase of the project, the group produced the first "work-a-text," a new resource for science that could be modified and changed as needed. Additionally, a set of criteria for the development of appropriate learning materials for high-school science students was established. Fawkes also recommended that a teaching guide and unit tests be developed to complement the new "work-a-text."

Advisor: Dr. Ron Hirst

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TESOL Curriculum
(Teaching English to Speakers of Other Languages)

Paula Mortimer, a teacher and head of the language department at Hawksbill High School, found that a curriculum for teaching English to Haitian and Creole students was needed. Three teachers collaborated on a project to create new instructional materials.

The target group was selected from 10th-grade Haitian and Creole students who were non-native speakers of English. Since these students did not have many positive school experiences, the goals of Mortimer's project were to promote more positive academic experiences and better social achievement as well as to improve grades.

The curriculum incorporated verbal, writing, and reading skills, the use of computers and closed captioned television. Some of the strategies were based on Wigginton's Fox Fire Approach (1989) and self-concept skills. The incorporation of technology played the most positive role in achieving successful results. According to the posttest results, not only did the students learn English beyond expectations, but their self-esteem increased as well.

Members of the target group, guidance counselors, the school principal, and the Haitian Consulate all supported implementation of the new curriculum. Mortimer recommended national adoption

of the program and continued development to meet the emerging needs of Haitian and Creole students on Grand Bahama.

Advisor: Dr. Joan Horn

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Social Studies Curriculum

Lavender Roberts, a Sunland Lutheran School second-grade teacher, determined that the second-grade social studies curriculum did not meet the developmental needs of the target population. Planned objectives were to produce a set of appropriate social studies activities, improve collaborative work skills, and increase critical thinking skills among second-grade students.

Roberts used two groups of students to develop activities called "Working and Learning Together." The activities made up the foundation of the new program based on principles of developmentally appropriate practices. This strategy was based on research by Feeney (1991) who suggested that the background of the children and their families, the culture, community characteristics, and values be considered when deciding on curriculum content.

The students were placed in a cooperative learning environment where new activities were introduced by the teacher. It was found that the use of creative approaches and cooperative learning with activities that focused upon real life experiences had a positive impact on the students.

The results of the practicum indicated that, as a result of the new curriculum, the students' scores increased beyond the projected outcomes. Roberts suggested developing a social studies curriculum for primary grades that involves cooperative learning activities, hands-on experiences, and more integrated subject matter with adequate time to fully explore the essential concepts.

Advisor: Dr. Wilma Robles de Melendez

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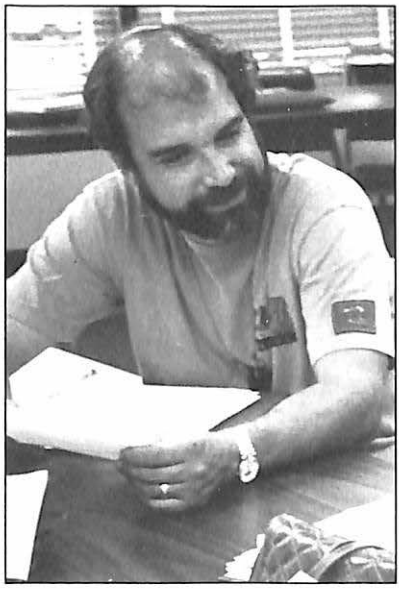
Computer Geometry

Richard Seniuk found that second and third grade students in his charge at Nova University's Summer Computer Camp did not fully understand the angular shapes of geometric figures.



Seniuk developed a program which included the students' designing and drawing geometric patterns using computer technology. With a computer program called *LogoWriter*, Seniuk developed worksheets to introduce the use of the "turtle" and its movements in production of geometric shapes (Papert, 1980).

Results were that after 12 sessions, significant gains had taken place in the target group's ability to recognize angle size, the number of angles in a figure, and the ability to use the turtle to create geometric shapes. Seniuk recommended integrating computer technology and this program in teaching geometry concepts to students in Grand Bahama.

Advisor: Dr. Dennis Murphy

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Interpersonal Skills Training

While teaching at Hawksbill High School, ***Althea Turnquest*** was concerned about twelfth-grade students' skills to work in the local tourist industry after graduation. Objectives of the practicum were to help the students improve their social skills, attitudes, and self-esteem, in order to assist them in performing in their future jobs.

Following the successful practices of Wright (1991-92), Turnquest implemented a mentoring program that introduced successful community members to students who were at-risk and who expressed a desire to work in the tourist industry after graduation. Through a planned program of seminars and community service, students became sensitized to the needs of the public they would encounter in their future jobs. Additional major strategies included mentoring, support groups, and role modeling.

Posttest scores showed that the objectives were met by many of the students. Turnquest recommended that this program be expanded and used throughout the year as part of the social studies curriculum. Additionally, the program could be adapted for other vocational subject areas such as cosmetology, hotel management and catering, pre-allied health, and construction technology.

Advisor: Dr. Wilma Robles de Melendez

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Leadership

Parent Involvement

Martha Bullard, a third-grade teacher at Freeport Primary School, saw a need to increase parental involvement at the school. It appeared that many parents took only a passive interest in their children's education and did not even attend parent-teacher conferences. A survey of eight teachers confirmed that fewer than 25% of parents were actively involved in their children's education. Objectives of the practicum were to increase home support and attendance at PTA meetings, as well as to initiate a program of daily parent-student home activities. The daily reading activities were intended to positively affect students' study skills and academic achievements.

Following the suggestions of Epstein (1988), Bullard created a program that included the role of parent as a co-learner by setting up a series of 10 parent meetings over a period of 13 weeks. Each meeting addressed a specific skill that could be used in the home assistance program. Bullard also used parents as volunteers in the classroom.

Results were that most of the targeted parents became involved by assisting students in school and at home. The number of students who turned in homework assignments increased significantly. Parents viewed the workshops as learning experiences that enabled them to become a part of the educational achievement of their youngsters.

Recommendations were to implement the project school-wide on a continuing basis.

Advisor: Dr. Yolanda Rivero

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After School Activities

At Freeport Primary School where ***Lillian Culmer*** taught fifth grade, no academic extracurricular activities were being offered. Culmer devised a program of intra-school competition among fifth graders from three schools. The students competed in math and thinking skills by using teleconferencing.

Culmer selected the audio-telepresentation quizzing method using touchstone speaker phones, as described by McConnell (1986). Four teachers and 15 students participated in the project. Teachers attended a preliminary training workshop on teleconferencing. Students worked cooperatively as teams for the problem-solving competitions among the three schools.

Teachers reported an improvement in student motivation and an excitement about the program as early as the third tele-quiz session. The students interacted more positively with their peers on the academic and social levels during the project. Throughout the program the students were not at all hesitant about continuing their education over the phone after regular school hours. The final results showed that the students increased the levels of achievement in math and critical thinking skills.

It was recommended that teleconferencing among schools be brought into the classroom, and that studios be set up in each

school to accommodate all grade levels for one hour of teleconferencing per week.

Advisor: Dr. Carmen Dumas

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Parent Volunteer Program

Coordinator of second grade at Lewis Yard Primary School, ***Alicia Garland*** noticed a problem concerning lack of involvement of parents in the education of the 119 second graders. Parents were not attending PTA meetings and they were not taking an active role in their children's education. A program was needed to bring together teachers who were eager to have parents volunteer in the classrooms and parents who appeared to be interested in volunteering in the school.

Research by Luder (1989), who concluded that children whose parents are actively involved in their schools performed better academically and behaved better than students whose parents were not involved, greatly influenced this project. Garland developed a series of training workshops for teachers and parents. Many parents, including fathers, participated and gained skills by attending the workshops. Parents were then encouraged to assist as volunteers in the classroom.

The final result was that many more parents attended PTA meetings. Those who volunteered in the classroom were able to interest others in attending PTA meetings and in volunteering at the school. Recommendations for continuation of the program included expansion of parenting classes, a parent recognition plan, and creation of a new staff position of Parent Volunteer Coordinator at the school. Garland was selected Teacher of the Year of the Lewis Yard Primary School as a result of this project.

Advisor: Dr. Joan Horn

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Crime Prevention

Coordinator of the Language Enrichment program at Freeport Primary School, ***Barbara Hall*** was concerned about violence, crime, and vandalism in the schools. Hall felt that these behaviors were precursors to more serious actions that students could develop later in life. Arresting vandalism, crime, and

violence in the early years would prevent students from committing more violent crimes later in life.

A U.S. Department of Education report on a violence-free program (Prothrow-Stith, 1987) was the basis for developing the intervention program. Fifteen students who had histories of fighting at school, their parents, and their teachers were involved in the project. Objectives were to reduce conflicts and referrals by increasing students' decision-making skills and increasing self-esteem. Problem solving and decision-making skills were geared to enabling students to make appropriate choices. Multicultural differences were stressed. Students learned to develop their own rules of conduct with a corresponding set of consequences for failing to fulfill those rules. Contracts were made between students and parents, peer support sessions were conducted, and parent-training sessions were held.

The results of the practicum indicated a significant improvement in classroom behavior, playground behavior, and behavior during recess. The project reaffirmed that prevention is an important part of a safe school environment. The program was extended to other areas of Grand Bahama.

Advisor: Dr. Ron Hirst

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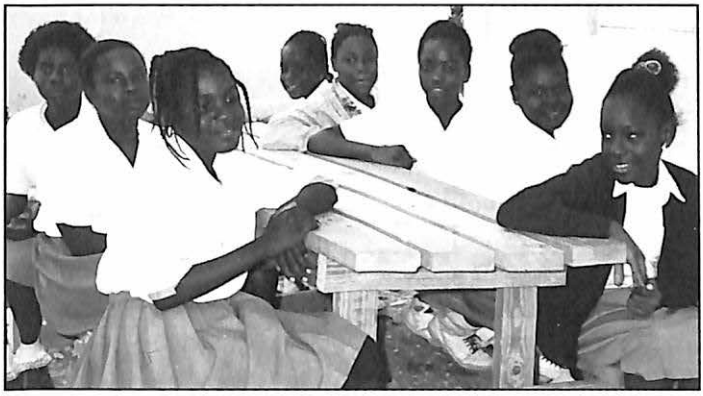
School Beautification

Lewis Yard Primary School teacher ***Monica Smith*** implemented a school beautification project. The objectives were to increase school pride, raise self-esteem of the students, and to develop community respect for the school.

In reviewing the literature, Smith read of Blinkley and Anton's (1984) conclusion that a positive school environment can create a spirit of togetherness and involvement. Parents, teachers, and students worked together to achieve the common goal. A project was begun to change the appearnace of the school. Small group teams/corps and renovation groups were formed in order to plant trees and shrubs, build benches, repair widows, or to paint the school.

Community members volunteered time to build park benches and to assist with gardening. A school sign with the Bahamian Coat of Arms was erected. Windows were replaced or installed, the school's fencing was totally replaced, and two of the main buildings were repainted. Prizes were given to students who contributed the most toward the beautification project. A School Community Prize trophy was given to the class with the highest participation. Companies in the community that contributed to the project received recognition certificates and plaques.



By the end of the project, students' attitudes toward school and self-esteem had increased by 75%. One of the most positive outcomes was that the project brought students, school staff, parents, and the community together for the common good. Community-minded persons expressed the desire to become involved in similar projects in the future. A School Maintenance Handbook was created to assist in maintaining the project.

Advisor: Dr. Carmen Dumas

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Children with Special Needs

The research project conducted by ***Sheryl Wood,*** principal of Grand Bahama Deaf Centre in Freeport, Grand Bahama, focused on detection of hearing loss among young children. The project was conducted in response to the concerns of special educators. District educators had frequently experienced problems caused by excessive time lapse between identification of children's developmental disabilities and the initiation of intervention.

The theoretical foundation of the project was based on findings by Ross (1990), who suggested that hearing-impaired children receive amplification early on, in order to avoid the deterioration of reciprocal processes of speech, language, and hearing. Wood also followed Ling's (1992) recommendations to assist preschool operators and health-care professionals with early detection.

Objectives for the project were that the 102 participants be able to identify at least three referral agencies for consultation, and that they learn appropriate screening processes. Wood conducted an extensive awareness campaign, which included 27 inservice workshops at various locations. Information regarding specific audiometry assessment techniques were presented. The participants were given information about inexpensive and user-friendly instruments for conducting specific tests.

Wood also developed a layperson's handbook for each preschool, for educators, and for medical practitioners. All objectives of the project were met and participants also increased their abilities to assist parents and children in locating proper organizations for further evaluations.

As a result of the project, an advocacy group was formed. Members of the group recommended that the media become more involved in educating parents about early detection of developmental delays and that posting of information in public

places like clinics, food stores, banks, and post offices be started. Letters were sent to various government agencies requesting assistance with a new mandate for early identification programs. Wood's project was selected from among 300 candidates for the GEM Program's 1993 Honors Award for outstanding school improvement projects.

Advisor: Dr. Joan D. Horn

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