The Primary Intervention Programme (PIP), designed to remediate first graders at risk for school failure and prevent special education placement, was implemented in two schools (one urban and one rural) in low socio-economic areas of Jamaica. The program involved four regular classroom teachers, two special educators, and two principals. Evaluation with the Grade One Readiness Inventory identified 94 students (66 percent), with a mean age of 7 years 8 months, as at risk for school failure. The special educators taught the regular classroom teachers special education techniques through monthly workshops. The regular classroom teachers implemented these techniques with the at-risk students. At the end of the school year, testing with the Academic Readiness Inventory revealed that only 16 (17 percent) of the students were still below mastery levels. Program evaluation by the teachers was positive. Findings support the early identification of students at-risk for school failure and implementation of special education techniques with these students in the regular classroom. (DB)
PRIMARY INTERVENTION PROGRAMME (PIP): A MODEL FOR STUDENTS AT-RISK.

PRESENTED BY

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1997
The Primary Intervention Programme (PIP) believed that a collaborative effort between special educators and regular classroom teachers of first graders, would remediate students at-risk for school failures and increase their academic readiness levels. The Primary Intervention Programme (PIP) was implemented in two schools (one urban and one rural) in Jamaica, with four regular classroom teachers, two special educators, and two principals. There were 94 students (66%) with a mean age of seven-years-eight-months who did not achieve mastery on The Grade One Readiness Inventory (GRI), (Ministry of Education National Assessment Project, Jamaica). The special educators taught the regular classroom special education techniques through monthly workshops. The regular classroom teachers implemented these techniques with the 94 students at-risk for school failure. At the end of the school year, an alternative Academic Readiness Inventory (ARI) was used to evaluate the students. The results revealed that only 17% (16) of the students were still below mastery. A Teacher's Evaluation Questionnaire (TEQ) was used to gain feedback on the programme. The findings suggest that if regular classroom teachers were able to identify students at-risk for school failure and implement special education techniques then these student should be able to remain in their regular classroom without entering special schools.
An economic and social survey conducted in the 1992-93 revealed that over 33,000 students with disabilities are in the regular school system (Ministry of Education and Culture, 1990). The survey also revealed that less than 10% of these students have been identified and are receiving the educational support required to approximate their respective levels of expectancy.

The majority of these children were labeled by their teachers as being slow learners or mentally retarded. Therefore, at the end of their primary tenure, other placement into the secondary school system was unlikely since they were unable to pass entrance examinations to enter such programmes.

Over the past five years (1990-1995), the School of Hope, for children with mental retardation has received numerous referrals for placement of these students. However the School of Hope is not geared or equipped to deal with the increasingly higher number of students being referred for placement in that institution. Many of these students may have since become drop-outs.

The Jamaica Association for Persons with Mental Retardation (JAPMR), who is responsible for the School of Hope, believes that if these "hidden" students can be identified at an early age and are exposed to intervention strategies in the first grade, then their prognosis may become more positive. The Primary Intervention Programme (PIP) was conceived to provide the necessary educational support for these students (who are at risk for school failure) to experience success in the classroom.

This programme we hope will also have a secondary benefit in that it will reduce the number of students removed from mainstream education and placed in special school (Self, Benning, Maston, & Magnusson, 1991), and it will also help to alleviate the psychological stress that these students experience when faced with all the ramifications of being placed in a School of Hope system after six or seven years in the community (regular) school.

The Concept
Research has shown that there are many children in schools who do not learn and achieve at the level expected for their age and grade placement (Sattler, 1988). These children have difficulty learning basic concepts,
materials and ideas introduced in their classes.

As educators, we are cognizant of the fact that their difficulty, disinterest, confusion or lack of comprehension are signals that the methods being used are, for whatever reasons, not working. The main focus of PIP then, is one of intervention, in order to ensure quality and excellence in education for all students, especially those who are at-risk for school failure.

With the implementation of PIP, the JAMPR hopes to:

- provide better outcomes for all first grade students;
- prevent students with mild mental retardation and other developmental disabilities from being removed from their community schools;
- foster placement and acceptance of all students in the classroom;
- foster the development of teachers skills in working with special needs students.

METHOD

Subjects and Settings

A pilot project was undertaken in four grade one classrooms in two primary school in Jamaica. There were four general educators (classroom teachers), two principals, and two special educators (the researchers) involved in the programme. There were 144 students in total, in which 94 of the students were identified at being at-risk, and were involved in the intervention programme. The students were between ages six and eight with an average age of 7-years-8-months.

One school was located in a rural community while the other was located in a urban community. Both community consisted of approximately 90% low socio-economic background.

Measures

Four types of instruments were employed, a national assessment instrument, an assessment inventory adapted by the researchers, a standardized cognitive battery, and a teacher's evaluation questionnaire.
National Assessment Instrument: The Grade One Readiness Inventory (GRI) created by The National Assessment Programme Jamaica. The test consisted of nine subtests which assessed motor-co-ordination, visual and auditory perception, as well as language usage and numeric knowledge. The test is graded on the following system, 100% - 75% for Mastery, 74% - 50% for Almost Mastery and below 50% for Non-Mastery. For the purpose of this research all scores below 74% were identified as being Below Mastery.

Adapted Assessment Inventory: The Academic Readiness Inventory (ARI) was adapted from Mann-Suiter's Developmental Screens. This test acts as a parallel to the GRI utilizing a similar scoring system.

Standardized Cognitive Battery: The Differential Ability Scales (DAS), is a test of cognitive ability, which examines verbal ability, nonverbal reasoning, spatial ability and academic achievement. It provides an overall general conceptual ability (GCA) score as well as a special nonverbal composite.

Teacher's Evaluation Questionnaire (TEQ): The TEQ a twelve item questionnaire was designed by the researchers in order to gain information on PIP, attitudes toward students at-risk, and information on school issues. Nine of the items dealt specifically with the evaluation of the PIP programme.

PROCEDURES

Prior to the start of the programme all students were encourage to undergo a medical examination to rule out or identify any conditions that would affect their achievement in the classroom. Figure 1.1 provides an overview of the PIP process. Initially all first graders were assessed using the Grade One Readiness Inventory (GRI). The researchers trained the four classroom teachers in the administration and scoring of the GRI. The GRI was administered during the second and third week of September, with two subtests day.

Students were identified for inclusion in PIP based on their performance on the GRI. Students whose scores fell within the Almost Mastery or Non Mastery range were classified as Below Mastery. This classification indicated a lack of or very limited readiness skills. Some
students who were Below Mastery were referred for a full psychological assessment. All students in the Below Mastery category were involved in a one year intervention programme while remaining in their class.

Fig. 1.1 PIP Process
Intervention Programme

The special educators conducted workshops with the regular educators on a monthly basis. The workshops were aimed at providing the classroom teachers with special education strategies, techniques and resource materials which could be used in their classroom.

Each class teacher was required to prepare individual readiness profile for their students, from this, the special educators formulated a general readiness profiles for the entire class. Based on the class profile, the regular class teachers were able to select the most common problem on which to begin working. Each workshop focused on two areas of readiness and provided hands-on training in strategies to enhance students acquisition of the specific readiness skills.

Intervention therefore, was (a) group oriented and (b) individualized and relied on the use of multi-level instructions. The materials and strategies were implemented in the classes, mainly as group activities. This format was considered most appropriate because of the limited resources available to both the regular and special educators. It was suggested that the group sessions should be conducted on a daily basis for approximately two thirty minute sessions. Group instructions involved the entire class and was activity oriented using games, songs and jingles. The individual session occurred approximately three times weekly and focus on those students who required additional assistance in specific readiness skills. The students involved in the individual programmes were allowed to work on work-sheets geared towards the particular area being addressed.

The special educators also visited the target schools on a bi-weekly basis to observe programme, provide work-sheets and feedback for teachers, and discuss students progress. Informal meetings were convened with the principals in order to provide insight into the general use of PIP, and its effect in the classes and schools.

During this period, some students whose performance fell in the Below Mastery category underwent a full psychology evaluation.

At the end of the intervention period, (May-June), students are given
the Academic Readiness Inventory (ARI). This is administered over a one week period before the students' "end-of-term-test". Based on their performance on the ARI decision was taken as to the kind of support that will be need for them to continue in their present placement.

RESULTS

The results are presented under two sections (a) students performance, and (b) teacher's evaluation.

Students Performance

From a total of 164 first graders, One hundred and forty-four sat the GRI. There were 94 (66%) students who did not achieve Mastery. These students are described as being "Below Mastery". Table 1.1 shows the results of the GRI.

Table 1.1: Distribution of students GRI readiness functioning level according to gender.

<table>
<thead>
<tr>
<th>Level</th>
<th>GRI</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>G</td>
</tr>
<tr>
<td>Non-Mastery*</td>
<td>40</td>
<td>15</td>
</tr>
<tr>
<td>Almost-Mastery*</td>
<td>25</td>
<td>14</td>
</tr>
<tr>
<td>Mastery</td>
<td>19</td>
<td>31</td>
</tr>
</tbody>
</table>

* Below Mastery

Students whose functioning fell in the Non-mastery and Almost Mastery levels were classified as Below Mastery, and they participated in the intervention programme.

Forty-eight students were further referred for full psychological assessment prior to the start of the intervention programme. These students were referred because of suspected disabilities. However, because of various factors only 25 of the 48 students were assessed. Fifteen (15) students were diagnosed as having mental retardation, two (2) as having
learning disabilities and eight (8) as being slow learners. Table 1.2 shows the distribution of students diagnosis.

Table 1.2  Distribution of Disabilities

<table>
<thead>
<tr>
<th>Type of Disability</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>Mental Retardation</td>
<td>11</td>
</tr>
<tr>
<td>Learning Disability</td>
<td>2</td>
</tr>
<tr>
<td>Slow Learners</td>
<td>6</td>
</tr>
</tbody>
</table>

n=25

After the intervention period, the students performance were evaluated on the ARI. Fifty-two (52) of the students attained "Mastery", while 16 attained "Almost Mastery" (Below Mastery). Twenty-six (26) students were absent during the administration the day of the post-test. Table 1.3 shows the comparison of the GRI and ARI result of the students involved in the intervention programme.

Table 1.3 : Comparison of students level of functioning on the GRI and ARI.

<table>
<thead>
<tr>
<th>Level</th>
<th>GRI B</th>
<th>GRI G</th>
<th>ARI B</th>
<th>ARI G</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Mastery *</td>
<td>40</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Almost -Mastery*</td>
<td>25</td>
<td>14</td>
<td>13</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Mastery</td>
<td>--</td>
<td>--</td>
<td>40</td>
<td>12</td>
<td>52</td>
</tr>
<tr>
<td>Absent</td>
<td>--</td>
<td>--</td>
<td>12</td>
<td>14</td>
<td>26</td>
</tr>
</tbody>
</table>

* Below Mastery  n=94

After the intervention programme none of the students who took the ARI performed at a Non-Mastery level. However, 16 students were still at the Below Mastery level.

It should also be noted that the students who were seen for
psychological testing also improved in their level of readiness functioning. The performance of these students is stated in Fig. 1.2

This diagram shows a comparison of the results of the GRI and ARI in these students with known disabilities. On the GRI, prior to intervention, all of the students' performance fell in the Below Mastery category, that is, none of these students were at the Mastery level. All fifteen students with mental retardation, one student with learning disability and seven slow learners were achieving at the non-mastery, while one slow learner and one student with learning disability achieved Almost Mastery.

A total of eight students with mental retardation were absent during the administration of the ARI. On the ARI, after the intervention, six students with mental retardation and six slow learners attained Mastery, while two slow learners, and one student with learning disability and one with mental retardation achieved Almost Mastery. Only these four students were still Below Mastery.
Teacher's Evaluation

The information gained from the TEQ and the informal meeting with the principal will be discussed. All four classroom teachers were asked to complete the twelve item TEQ. However, the nine questions which dealt specifically with PIP will be addressed here.

*Did the Workshops meet your expectations and beneficial?* Three of the four teachers said the workshops met their expectations. All four thought the workshops were beneficial, especially the topics which focused on intervention strategies.

*How effective were the intervention strategies in instructional planning?* All four thought the strategies were very effective.

*How effective were the resource materials in assisting with problem areas?* The teachers stated that the materials were very effective however they were limited. There were not enough for all the students who needed because of lack of facility to reproduce them.

*Do you think collaboration between Special Educators and Regular Educator is an effective way of meeting the needs of students at-risk?* Teachers believe that collaboration between these two groups of educators will have a positive effect on the students. The following two quotes represent the consensus of the teachers.

... work together to identify the strength and weaknesses in students and provide suitable strategies to deal with them.

... with effective planning both teachers will meet the need of the students.

*Would you be able to train other staff, and continue PIP in your school without the support of the Special Educators?* They all believed that they would be able to train staff. However, two teachers were unsure of their ability to continue PIP, because they thought that they may not have access to some of the resource materials and lack of financial resources. The other two believed that they could but were still in need of directions.
Do you think the students at-risk in your class benefited from PIP? All four teachers agreed that the students benefitted. Some reactions are as

...observed both personal and academic growth.

...developed more self-esteem. ...felt wanted and secure, people care and cater for their strengths and weaknesses.

...improved and ready to learn

What are some of the benefits that occurred as a result of PIP in ...

a. Your students at-risk? The main benefits that the teachers saw were:
   ... developed greater self-concept and better able to handle the learning process.

b. You (teacher)? The main gains expressed were their newly acquired skills which enabled them to work with the students.

Can you suggest some ways in which PIP may be improved? Three of the teachers suggested that the programme should be extended, with funding from the government, to the third grade or to any other grades with students at-risk.

What do you think should happen to the students at-risk that are presently in your classroom? The teachers shared mixed points of views. Two believed that they should continue in programmes such as PIP. While the other two believed that they should be placed in a smaller class with more individualized attention.

The principals believed that there were improvement within the entire first grade classes. They also stated that students "end-of-term" test scores revealed that over 90% (147) of the total number of students received at least half of the total marks allotted for their class test (this is inclusive of students with known disabilities). In one school, it was the first time in its history that there were no student recommended to repeat the first grade.

Discussion

The implementation of Primary Intervention Programme in the two schools, indicates that PIP will be beneficial to the educational system in our
Primary schools. Firstly, the results of this research indicate that students will perform at a higher level if teachers could ensure that all students have a good repertoire of readiness skills on which to build their academic base.

Secondly, students at-risk for school failure, were given a chance to remain in their community schools and not be pulled out and placed in special schools. This is in keeping with the emerging tenet of current educational practices which promotes the inclusion of all students, as much as possible in their communities.

Thirdly, the attitude of teachers towards students with special needs were more positive and their expectations for these students were higher, yet also realistic. Fourthly, the regular educators assumed the responsibility for teaching these students, rather than using a pull-out system for remodiation. Fifthly, the collaborative effort between special and regular educators can make a positive contribution to the education process and to decrease the need for special education placement.

Although the regular educators were pleased with the programme. There were some apprehension on their part as to the effectiveness of the programme in classrooms which were overcrowded and lacking in resources. They were somewhat disappointed that the programme was unable to provide more instructional aids and materials.

Based on the research the researchers recognized that a psychological evaluation would be more beneficial at the end of the intervention period. This is due to the fact that at the end of the intervention programme, many of the students suspected of having a disability no longer presented in that manner. In addition it would allow for better time management, since as much time would not be spent conducting unwarranted psychological evaluations.

These are some recommendations for students and teachers who were involved in the PIP during the first grade.

1. All students who are still below mastery level in readiness should be involved in a Resource Room programme.

2. The Grade One teachers who were involved in the PIP could work
as the resource room teacher.

3. The students should attend the resource room at least twice weekly for two hours.

4. The Grade One teachers should work closely with the second grade teachers to effectively teach the students who are still below mastery.
References


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