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ABSTRACT

This report evaluates the use of instructional models in eight New York City high school remediation programs funded in 1988/89 by Chapter 1 of the Education Consolidation and Improvement Act and the Pupils with Compensatory Educational Needs (PCEN) program. It found that teaching strategies within each of the models were surprisingly similar. The following models were examined: (1) Model A, providing a supplementary reading/writing lab class for up to 20 Chapter 1 or PCEN students in conjunction with a course on the same subject; (2) Model B, infusing remediation into the regular curriculum of PCEN students; and (3) Model D, providing remediation for up to 17 Chapter 1 students with one teacher, or up to 34 students with a two-teacher team approach. Teachers of Math Skills and English Instructional Services (EIS) both used testing to identify areas of need, supplementary materials, preparation drills for the Regents Competency Tests (RCT), and computers for skill building. Most English-as-a-Second-Language (ESL) teachers used small-group learning, peer tutoring, and homework helpers to teach a mixture of students who all needed help in English but only some of whom needed remediation in basic skills. Teachers perceived that the programs were effective by giving students attention that they could not receive in the regular classroom. Teaching strategies within models were similar: 68 percent of the sample classes, based on Models B or D, infused remediation into the regular curriculum. (FMW)

OREA Report

EVALUATION SECTION REPORT

CHAPTER 1 AND PUPILS WITH COMPENSATORY EDUCATIONAL NEEDS (P.C.E.N.) COMPARISON OF INSTRUCTIONAL MODELS

1988-89

Office of Research, Evaluation and Assessment
Robert Tobias, Director
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July 1990

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1988-89

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Summary

During the 1988-89 school year, evaluators from the Office of Research, Evaluation, and Assessment (OREA) visited eight New York City high schools to examine the use of instructional models in remediation programs funded by Chapter 1 and Pupils with Compensatory Educational Needs P.C.E.N. OREA conducted interviews with teachers and administrators involved in the teaching and planning of these programs. Model A provides a supplementary reading/writing lab class for up to 20 Chapter 1 or P.C.E.N.-eligible students. These classes must be taken in conjunction with a tax-levy course in the same subject. Model B, intended for P.C.E.N.-eligible high school students only, infuses remediation into the regular curriculum. Model D, intended for Chapter 1-eligible students only, provides remediation for up to 17 students with one teacher, or no more than 34 students if a two-teacher term approach is used. Most reimbursable classes were based on remediation Model B (32 percent) or (36 percent) with the supplemental lab Model A (28 percent) as the third most often utilized.

The needs of a particular class or group of students usually dictated the remediation strategies used in reimbursable classes. Similar methods were used by teachers of Math Skills and English Instructional Services (E.I.S.) These included testing to identify areas of particular needs, use of supplementary materials, preparation drills for Regents Competency Tests (R.C.T.s), and the use of computers to help strengthen particular skills. Most English as a Second Language (E.S.L.) teachers had a mixture of students, all of whom needed help in English, but only some needing remediation in basic skills. Therefore, these classes relied more heavily on small-group learning, peer tutoring, and homework helpers. The majority of teachers used these techniques, and others, when necessary. Most classes had between 10 and 17 students in attendance, and small class size was considered an important factor in effective remediation.

Eighty percent of teachers received help with curriculum and instructional techniques. However, 54 percent reported receiving no assistance with student behavior management, and 56 percent got no help assessing student progress.

CONCLUSIONS AND RECOMMENDATIONS

Teachers perceived that the remediation programs administered under the auspices of Chapter I/P.C.E.N. were effective in helping many students in need of extra instruction in basic reading, writing, and mathematics. Students received the necessary attention they could not get in regular classes. Teachers felt they were reaching a group of students who might otherwise be overwhelmed by academic failures. Teaching strategies within individual models were surprisingly similar. This was probably due to the fact that 68 percent of the sample

classes, based on models B or D, infused remediation into the regular curriculum.

Based on the findings set forth in this report, the following recommendations are made:

- Rely more heavily on teacher input when determining the most appropriate instructional model for students in need of remediation.
- Continue to allow flexibility of teaching strategies so teachers can customize programs to the needs of students.
- Establish a minimum standard of basic skills in the native languages of students so that E.S.L. classes can successfully address students' needs.
- If funds permit, restrict class size to 15 students to assure effective remediation.
- Institute an on-going support system to help teachers with behavior managment and assessment of academic progress.

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I. INTRODUCTION

PROGRAM BACKGROUND

Chapter 1 and Pupils with Compensatory Educational Needs (P.C.E.N.) are two funding sources of remediation programs for those students in need of extra instruction in basic reading, writing and mathematics. English Instructional Services (E.I.S.), Math Skills, and English as a Second Language (E.S.L.) are three of the programs funded by Chapter I and P.C.E.N. in New York City public schools. The reading/writing and math programs are aimed at students who score below state reference points on reading and math tests. English as a Second Language provides instruction in English language skills to students whose native language is other than English.

A school is eligible for federal Chapter 1 funding based on a formula that calculates the number of children in the school's attendance area in families receiving Aid to Families with Dependent Children (A.F.D.C.), and the number of students in the school qualifying for free or reduced lunch. A school is eligible for state P.C.E.N. funding if a certain proportion of its student body fails to meet specific academic standards. Chapter 1 and P.C.E.N. funds are allocated to high schools by the area superintendents based on each school's number of eligible students.

This report focuses on the relative merits of instructional models A, B, C, and D used to enhance teaching techniques in reimbursable classes. Model A provides a supplementary reading/writing lab class for up to 20 Chapter 1 or P.C.E.N.-

eligible students. These classes must be taken in conjunction with a tax-levy course in the same subject. Model B, intended for P.C.E.N.-eligible students only, infuses remediation into the regular curriculum. Classes are limited to 25 students. The interdisciplinary Model C pairs a tax-levy content area teacher with a remedial teacher. Remedial instruction, based on lessons from the content area, is given to up to 20 Chapter 1/P.C.E.N. students. Model D, intended for Chapter 1-eligible students only, provides remediation for up to 17 students with one teacher, or for no more than 34 students if a two-teacher team approach is used. All classes are scheduled for five periods a week.

EVALUATION METHODOLOGY

In April 1989, evaluators from the Office of Research, Evaluation, and Assessment (OREA) visited eight high schools* to interview teachers and administrators involved in Chapter 1 and P.C.E.N.-funded programs. Evaluators also sat in on some classes to observe the methods used by teachers and the responses of students. Schools selected had funded programs in all three areas, i.e. Math Skills, E.I.S. and E.S.L. Also, evaluators attempted to select schools with small, medium and large Chapter 1/ P.C.E.N. programs. As always, schools were chosen from various boroughs.

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*Site visits were made to John F. Kennedy and Evander Childs in the Bronx; Sarah J. Hale and George Wingate in Brooklyn; Park East and George Washington in Manhattan; William Bryant and Francis Lewis in Queens.

The information presented in this report is based on these interviews and observations. Outcome data, including test scores and attendance figures, can be found in separate reports chronicling school-by-school results.

SCOPE OF THIS REPORT

This report describes instructional models as used in Chapter 1/P.C.E.N. classes in eight New York City high schools during the 1988-89 school year. Chapter I gives the background of the program; Chapter II focuses on organization and implementation of the programs; and Chapter III presents conclusions and recommendations.

II. IMPLEMENTATION

STAFF EXPERIENCE

OREA conducted interviews with 46 teachers and three assistant principals from eight New York City High Schools. The interviewees were evenly divided among Math Skills, E.I.S. and E.S.L. staff. The majority of teachers had at least ten years teaching experience, and only two had taught for less than two years. Fully one-third of the teachers had at least ten years experience teaching Chapter 1 or P.C.E.N. classes, and only two teachers had less than one year experience in this area.

INSTRUCTIONAL MODELS

Most reimbursable classes were based on remediation Models B (32 percent) or D (36 percent), with the supplemental lab Model A (28 percent) as the third most often utilized. Only two classes (both E.S.L.) from Evander Childs and William Bryant High Schools used the Interdisciplinary Model C structure, and at William Bryant, E.S.L. classes were held utilizing Model D as well. A Math Skills teacher at George Wingate combined models giving two classes under Model B, and three classes using a supplementary lab. Very few teachers (less than ten percent) reported having any input in deciding just which models would be used. This decision was usually made by the school administration, most often by either the department chairperson or an assistant principal. Decisions were most often based on students' scores on either Degrees of Reading Power (D.R.P.) or Regents Competency Tests (R.C.T.s). The level of remediation needed and student

graduation requirements were also important factors in determining the nature of the classes.

TEACHING TECHNIQUES

Since most classes used the reduced class size models B and D, teachers were asked just how they infused remediation into the content area. Similiar techniques were used in both math and English classes. These included testing to identify areas of particular need, use of supplemental materials (math magazines, daily newspapers), preparation drills for D.R.P. and R.C.T.s., use of computers to help clarify particular skills, and homework assignments concentrating on areas of remediation. Many teachers made attempts to fashion the material to students' interests. For example, math problems were centered around shopping expeditions to local stores, and English assignments concentrated on issues (AIDS, for example) relevant to the students. Approaches often depended on student needs and individual teaching styles. Many teachers organized classes so that small groups of students with similar needs worked together. One teacher spent approximately 20 minutes on remedial exercises and used the remainder of the period to cover the mandated curriculum. Another teacher chose to teach content area material only but did so on an individual basis. One math teacher reported using a bilingual textbook because many of his students lacked sufficient English language skills.

Computers were often used in both writing and math skills classes. Except for one or two complaints about unsatisfactory

software, teachers who had access to computers agreed that they were a tremendous help in honing students' skills. Students looked forward to working on the computers and eagerly applied themselves to assigned tasks. Math teachers believed that they were particularly helpful as a tool for teaching specific skills such as fractions and multiplication. English teachers agreed that word processing skills were an immeasurable aid in helping students work through problems they had with organizing their ideas and understanding the writing process itself.

It was apparent that most E.S.L. teachers had a mixture of students, all of whom needed help in English, but only some needing remediation. Therefore, E.S.L. classes frequently used small learning groups, peer tutoring, and homework helpers with the better students helping the lower achievers. A number of teachers suggested that students be separated according to ability, and that lower achieving students take a basic skills class in their native language before being accepted into E.S.L. classes.

Teachers using supplemental class instruction (Model A) tried various techniques to capture student interest and make good use of class time. Math labs included computer games that were challenging as well as fun, manipulatives to strengthen number concepts, and mini-lessons focusing on an important topic or skill. Computers were also used in English labs for dictation and to explore a range of writing techniques (outlines, composition, and revision). Students were encouraged to write

about things they had personal knowledge of, and daily newspapers were often used to stimulate thought and discussion.

The teacher at William Bryant whose class was based on the interdisciplinary Model C, incorporated social studies and science into the E.S.L. curriculum. To further challenge the E.S.L. students, debates were held based on these areas of learning.

The needs of a particular class or group of students usually dictated the remediation strategies used. Small group learning worked best when students had to do specific reports. Students working together felt comfortable asking questions of one another and were able to take responsibility for needed corrections. While moving from group to group, teachers identified strengths and weaknesses of individual students. Cooperative learning was most effective when the class was well organized, and a goal was clearly defined by the teacher. With those components in play, students enjoyed learning in a structured but non-competitive atmosphere, and took responsibility for the work before them.

While peer tutoring worked well in most cases, a few problems surfaced. The technique was successful when the student tutor had sufficient knowledge and know-how to help another student, and when the tutee was cooperative. However, sometimes the tutor wasn't able to communicate well enough or did not know how to deal with a less receptive student. Also, when a good relationship was established, it was difficult for some students to resist using the time for socializing. In any event, close

teacher supervision was necessary during peer tutoring.

Many teachers thought that individual instruction was an important teaching technique but, realistically, had to be reserved for the lowest achieving students and for those with special needs. However, a few teachers argued that it put too much pressure on individual students and deprived them of important peer interaction. Conversely, full class learning was thought more effective with students near grade level. It was recommended that it be used in conjunction with other teaching strategies as deemed appropriate.

It was obvious to all teachers and administrators interviewed that different students had different needs. Eighty-eight percent thought the most important programming characteristic for lowest achieving students was a supplemental lab focusing on basic skills, and 78 percent ranked five periods a week of remedial classes as the second most important. Students near grade level, however, were thought to benefit most from credit-bearing classes (78 percent) and remediation within the regular curriculum (73 percent.) Credit-bearing classes were important to this group because it helped them realize they were working towards an attainable goal, i.e. graduation. Classes made up of all Chapter 1 or P.C.E.N. students was considered the least important programming factor for both groups.

Teachers were asked to discuss the type of assistance and feedback they received during implementation and teaching of reimbursable classes. Responses were consistent across program

borders. When there was a considerable difference in response, it tended to be by school, not by program.

Eighty percent of teachers reported getting assistance with curriculum, instructional techniques, and use of instructional materials. This help most often came from the department chairperson, assistant principal or other teachers. However, some teachers also attended Chapter 1 teacher training, staff development workshops, and sessions with a reading coordinator. Sixty-five percent of all teachers received help developing remedial strategies.

Far less help was forthcoming in the areas of behavior management and assessment of student progress. Fifty-four percent reported receiving no help whatsoever with student behavior, and 56 percent had no help assessing student progress.

Nonetheless, teachers were generally enthusiastic about these programs. Teachers believed that the programs were essential for certain students who would have little hope without them. In addition, a number of teachers commented that R.C.T. scores of students have risen in direct response to participation in the remedial programs

OBSERVATIONS

Evaluators from OREA observed at least one class at each school. There were few differences observed across models; though model A E.I.S. classes did tend to stress more creative writing assignments, classes were usually set up in the traditional manner, i.e., students working at desks with the

teacher conducting the lesson from the front of the room. However, after the lesson was presented and students began to work on their own, the teacher would walk around the room and help each student individually. All students were involved in their work, and when small groups were organized, they worked well together. In some classes, a paraprofessional was available to help students as well. It is interesting to note that most of these classes had between 10 and 17 students. (Although one E.I.S. teacher did report having a class of 34.) The small classes helped considerably in giving necessary attention to each student. In fact, many teachers felt that in order to make an impact, remedial and supplemental classes should never have more than 15 students.

III. CONCLUSIONS AND RECOMMENDATIONS

The remediation programs administered under the auspices of Chapter 1/P.C.E.N. were effective in helping many students in need of extra instruction in basic reading, writing, and mathematics. Students received the necessary attention they could not get in regular classes. Teachers felt they were reaching a group of students who might otherwise be overwhelmed by academic failures. The vast majority of teachers displayed interest, patience, and creativity in their use of materials and strategies.

While the original intent of this evaluation was to highlight the differences between the various instructional models utilized in reimbursable classes, more similiarities than differences were uncovered. This was probably due to the fact that most classes (68 percent) in this sample were based on models B or D and infused remediation into the content area. However, 88 percent of those interviewed thought a supplemental lab (used in only 28 percent of the sample classes) focusing on basic skills would be most beneficial to lower achieving students. While this disparity might be indicative of our sample only, administrators should certainly rely more heavily on teacher input when determining appropriate instructional models. Teachers strongly believe that diverse student achievement levels must be taken into account when deciding on programming characteristics.

There was a particularly wide disparity in the achievement levels of E.S.L. students. Therefore, teachers of these classes tended to organize small learning groups and encourage peer tutoring and homework helpers. However, E.S.L. teachers believed that their students should be separated according to ability, and that lower achieving students would benefit by first taking a basic skills course in their native language.

Most classes had between 10 and 17 students in attendance. This allowed teachers to give students individual attention when necessary, and proved to be a most effective component in remedial instruction.

The majority of teachers received sufficient support with curriculum and instructional techniques. However, more than half of those interviewed reported receiving no assistance with behavior management, or with assessment of student progress.

Based on these findings, the following recommendations are made:

- Rely more heavily on teacher input when determining the most appropriate instructional model for the students in need of remediation.
- Continue to allow flexibility of teaching strategies so teachers can customize programs to the needs of students.
- Establish a minimum standard of basic skills in the native languages of students so that E.S.L. classes can successfully address students' needs.
- Restrict class size to 15 students to assure effective remediation.
- Institute an on-going support system to help teachers with behavior management and assessment of academic progress.