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#### Abstract

This report presents the findings of two phases of a study of Asian limited-English speaking middle school and high school students' experiences in sheltered classes as compared with mainstream classes in the School District of Philadelphia (Pennsylvania). The study involved focus groun interviews conducted with 114 English as a Second Language (ESOL) Level 4 Asian students at the secondary school level, classroom observations and interviews conducted with 10 high school content area teachers who taught both mainstream and sheltered classes in the same subject, and case studies ol 59 Asian Limited English Proficient (LEP) students who attended these sheltered classes. The findings from the student focus groups indicated that at least 66 percent os the high school students and 90 percent of the middle school students felt they were learning content area subjects adequately in mainstream classes. Most of these students expressed a preference for classes with regular students and a desire to have taken regular classes when they were in ESOL Level 3. The findings from the teacher study revealed that sheltered class students received essentially the same curriculum as did their mainstream counterparts regardless of subject, and that most teachers in the sample modified their teaching to accommodate the needs of LEP students. However, few of these teachers used visual aids, props, or audiovisua: equipment; and even fewer engaged the students in hands-on activities or cooperative learning. Recommendations from the study point to the need for more intensive work with both sheltered and mainstream content area teachers in the use of techniques that are critically needed for LEP students, and are also appropriate for mainstream students. (JB)


# The School District of Philadelphia 

## THE SCHOOL DISTRICT OF PFTLADELPHIA

OFFICE OF ASSESSMENT

REMEDIAL PLAN FOR ASIAN LEP STUDENTS
AN ASSESSMENT こr SHELTERED V. MAINSTREAM CLASSES IN NEW INSTRUCTIONAL MODEL SCHOOLS

1991-1992
Report \#9302
September 1992
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# THE SCHOOL DISTRICT OF PHILADELPHOA OFFICE OF ASSESSMENT 

REMEDIAL PLAN FOR ASIAN LEP STUDENTS

AN ASSESSMENT OF SHELTERED V, MAINSTREAM CLASSES IN NEW INSTRUCTIONAL MODEL SCHOOLS

1991-1992

Report \#9302
September 1992

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## EXECUTIVE SUMMARY

This report presents the findings of two phases of a study which seeks to provide more insight into students' experiences in sheltered classes as compared with mainstream classes. The third phase of the study is still in progress and will be reported at a later date. The three phases of the study are: 1) focus group interviews which were conducted with 114 ESOL Level 4 Asian students at the secondary level, 2) classroom observations and interviews conducted with 10 high school content area teachers who taught both mainstream and sheltered classes in the same subject, and 3) case studies of 59 Asian LEP students who attended these sheltered classes.

The findings from the student focus groups indicated that at least $66 \%$ of the high school students and $90 \%$ of the riddle school students felt they were learning content area subjects adequately in mainstream classes. Most of these students expressed a preference for classes with regular students and reiterated the previous year's findings that they would have liked to have taken regular classes when they were in ESOL Level 3. Students reported that they felt their English was improving because of their exposure to regular students. Although the findings show that there had been improvements in the way Asians and non-Asians mixed now that students were in regular classes, $43 \%$ of the high school students reported that they did not work with non-Asian students in their classes, and were less than enthusiastic about their relationships with non-Asians citing a number of problems such as language difficulties, cultural differences and discourteous treatment by non-Asian students. Despite these difficulties, the overwhelming majority expressed a desire to interact more with non-Asian students.

The findings from the teacher study revealed that sheltered class students received essentially the same curriculum as their mainstream counterparts regardless of subject, and that most teachers (seven) in the sample modified their teaching to accommodate the needs of LEP students. However, few of these teachers employed visual aids, props or audiovisual equipment, and even fewer engaged the students in hands-on activities or cooperative learning. These techniques have been repeatedly recommended for use with LEP students. The paucity in the use of these techniques was also reported in the sneltered class study conducted last year. A school-by-school analysis showed some problems that need attention at the largest high school, where large sheltered classes and teaching styles that were not reflective of the adaptive teaching techniques recommended by the Office of Language Minority Programs predominated.

Recommendations from these two phases of the study point to the need for more intensive work with both sheltered and mainstream content area teachers in the use of techniques that are critically needed for LEP students, and are also appropriate for mainstream students. In particular, there is a need to train secondary teachers in techniques which encourage students to interact and work with each other such as cooperative learning and team building. Our research has shown that few content area teachers avail themselves of the centralized professional development workshops.

It is therefore recommended that on-site training be provided. Perhaps giving schools an opportunity to submit their own staff development plans and providing the necessary support to implement them would meet with better results.

Some modifications are also suggested for the ESOL Level 3 Program where students tend to be cut off from mainstream students.

## INTRODUCTION

This study seeks to provide more insight into ESOL students' experiences in sheltered classes as compared with mainstream classes. To this end, three phases of the study were planned: 1) the first phase involved focus group interviews with middle and high school Asian students who were in ESOL Level 4. An attempt was made to contrast these students' experiences in mainstream classes with their experiences in sheltered classes in 1990-1991, 2) the second phase involved studying content area teachers who taught both a mainstream and a sheltered class in the same subject, and 3) the third phase involved case studies of fifty-nine Asian LEP students from the sheltered classes in phase 2 of the study.

This report discusses the findings of phases 1 and 2 of the study. The third phase is still in progress and the findings will be reported at a later date. Section 1 of this report discusses the findings from the student focus groups and can be found on page 2. Section 2 discusses the findings from the teacher study and can be found on page 7.

## SECTION 1: ESOL LEVEL 4 STUDENT FOCUS GROUPS

In an attempt to contrast ESOL students' experiences in mainstream classes with their previous experiences in sheltered classes, a number of focus groups were conducted with ESOL Level 4 students in the Fall of 1991. Questions asked of students were intended to shed more light on the previous year's findings, where the majority of Level 2 and 3 students indicated that they would have preferred to be in classes with native English speakers. How students felt they were faring in mainstream classes, and how well they were interacting with their peers was also investigated.

The sample included 114 ESOL Level 4 Asian students from Furness High, South Philadclphia High, Olney High, Vare Middle and Cooke Middle. Eighty-three high school students and 31 middle school students participated in focus groups (each composed of 5 or 6 students). This sample represented $42 \%$ of the Level 4 Asian high school students and $91 \%$ of the Level 4 Asian middle school students at these schools.

The questions asked of students and the findings are discussed below:
Question 1. How much do you feel you are learning in science, social studies and mathematics on a scale from 1-10, where 1 is the lowest and 10 is the highest?

At the high school level approximately two thirds (67\%) of the students assigned ratings of 6 or above to how much they were learning in mainstream science and social studies. In mathematics, the percentage was even higher, with $84 \%$ assigning ratings of 6 or above. At one middle school this same pattern emerged, and at the other middle school at least $92 \%$ of the students assigned a 6 or above rating to their learning in all three content areas. It seems reasonable to conclude that most of the students queried felt that they were learning the content adequately.

Question 2. Do you prefer taking science, mathematics* and history classes with regular students as you do now or taking classes with only ESOL students as you did in Level 3?

Seventy-eight percent ( $n=65$ ) of the high school students and $94 \%(n=29)$ of the middle school students indicated that they preferred taking classes this year with regular students. High percentages of students reported that they felt their English was improving because they were taking classes with regular students. The majority also indicated that they would have liked to have taken classes with regular students last year, i.e. $60 \%$ of the high school students and $83 \%$ of the middle school students.

* Most students took mainstream classes in mathematics at Level 3 last year, with the exception of Olney High students, where mathematics classes are sheltered at this level.

Question 3. Do you notice any differences in the ways that Asians and non-Asians mix now as compared to last year when you were in Level 3?

At the two larger high schools, $38 \%$ of the students reported that there had been improvements in the ways Asian and non-Asian students mixed now that they were in mainstream classes. At the third high school and the two middle schools, at least $50 \%$ of the students had noticed a positive difference in the ways students mixed. The remaining students felt that relationships had not changed, and $5 \%$ reported that relationships had deteriorated.

Question 4. Do you work with students in your classes who are not from your same language background and who are not Asian?

At the two larger high schocls, $44 \%(n=28)$ of the students indicated that they worked with students who were not from the same language background and who were not Asian. At the third high school, all but one student reported working with students of different backgrounds. This was also true at the middle school level, where the majority of students $(87 \%)$ reported working with students from different backgrounds. Reasons given by some students for not working with students of different backgrounds were difficulties in communication or simply because they had not been asked by other students.

Question 5. How do you get along with students who are not Asian?
At all three high schools, students were less than enthusiastic about their relationships with non-Asians. Only $27 \%$ of the high school students reported that they got along well with non-Asians and $24 \%$ described their relationships as "OK", which the evaluators interpreted as ofter meaning "I mind my business and they mind theirs". Another $6 \%$ indicated that things were "OK" in class, but not outside of class. The remaining $43 \%$ of the high school students said there were problems getting along because of language and cultural differences, difficulties in understanding, and because some students picked on them, insulted them, pushed them and did not treat them courteously. Two students indicated that they had no opportunities to talk to American students.

At the middle school level, $93 \%$ of the students were much more positive than the high school students about their relationships with non-Asians, and indicated that they got along well. The remaining $7 \%$ reported that there were no problems in class, but problems outside of class included name calling, kicking, fighting and being told "to go back to their country".

## Question 6. Would you like to interact more with non-Asian students?

Eighty-two percent ( $82 \%$ ) of the high school students and $94 \%$ of the middle school students indicated that they would like to interact more with non-Asian students. Reasons given were the desire to: make more friends, learn more English, learn more about Americans, American ways and American culture.

Question 7. Are there things that the school could do to help Asians and non-Asians mix more?

Students made a number of interesting suggestions to facilitate interaction:

- design a program which would explain the different cultures and religions
- plan joint trips, group meetings to share thoughts, feelings
- set up classes with activities where Asians and non- Asians could work together to resolve problems
- have discussion groups led by teachers so that students could discuss their feelings
- have students tutor each other
- teachers could have students work with partners or in groups
- have all mixed classes
- mainstream students earlier
- have "mixer clubs" and get-acquainted parties after school
- encourage team sports composed of both groups
- school administration should explain to students the importance of making friends
- the school could make rules encouraging students to get along better and stress brotherhood


## SUMMARY OF FINDINGS

Two thirds of the high school students and $90 \%$ of the middle school students reported learning science and social studies adequately in mainstream classes. Eighty-
four percent of the high school students and $90 \%$ of the middle school students reported learning mathematics adequately. Most students expressed a preference for classes with regular students and felt their English was improving because of their exposure to regular students. The majority reaffirmed the previous year's findings that they would have preferred to take classes with regular students last year.

At the high school level $57 \%$ of the students reported that they worked with students in their regular classes who were from different language backgrounds and who were not Asian. Forty-one percent felt that there had been improvements in the way Asians and non-Asians mixed, but many students (43\%) reported a number of problems preventing Asian students from getting along with non-Asians such as language difficulties, cultural differences and discourteous treatment by non-Asian students. Despite these problems, the overwhelming majority ( $82 \%$ ) of high school students expressed a desire to interact more with non-Asian students and made some excellent suggestions for accomplishing this.

At the middle school level the findings were more positive with at least $87 \%$ of the middle school students reporting that they worked with students from other language backgrounds as well as non-Asians in their classes and that they got along well. Fiftyfive percent indicated that there had been improvements in the ways that Asians and non-Asians mixed and few students reported recurring problems.

## CONCLUSIONS AND RECOMMENDATIONS

There is clearly a strong desire on the part of ESOL students to become acculturated and to interact with American students. Most of the students in this study reported that they would have preferred to have been in classes with regular students whil ' they were in ESOL Level 3 last year. Whether students in Level 3 would be able to handie more mainstream classes will become clearer when the analysis of the student case studies has been completed.

The findings of this phase of the study appear to indicate that attending classes with mainstream students increases the likelihood of interaction between Asians and non-Asians, i.e. $41 \%$ of the high school students and $55 \%$ of the middle school students felt that there had been improvements in the ways Asians and non-Asians mixed. Since ESOL Level 3 iniddle and high school students have limited exposure to non-Asian students, this finding is not surprising. However, the findings also indicate that even when students are in mainstream classes, much more needs to be done to encourage students of differerit backgrounds to work together. This is especially true at the high school level, and in particular at the larger high schools.

Techniques designed to facilitate peer interaction include cooperative learning and peer tutoring. Mainstream teachers need to be encouraged to use these techniques. Last year's findings indicated that even sheltered class teachers rarely used them, despice the

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fact that these techniques have been repeatedly recommended for use with LEP students to facilitate language development. The findings from phase 2 of this study also show that few of the ten teachers in the sample employed these techniques. A concerted effort is needed to get secondary teachers to implement these techniques, as well as encouraging teachers to plan joint student projects and activities which require students of different cultures to work together and explore each other's cultures.

Some changes may also be needed in the ESOL Level 3 New Instructional Model Secondary Program, such as a period devoted to bringing mainstream and ESOL stadents together for the express purpose of planning joint projects and providing peer tutoring. Perhaps this can be accomplished in the context of the bilingual instructional support period time.

As recommended in a recent evaluation report* which assessed the effectiveness of centralized professional development efforts, more of the available staff development resources need to be focused on school sites so that the desired changes can be effected.

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## SECTION 2: SHELTERED V. MAINSTREAM INSTRUCTION

In an effort to gain more insight into the differences between mainstream and sheltered class instruction, teachers who taught the same subject in both sheltered and mainstream classes were selected for intensive study at Furness High, Olney High, South Philadelphia High and University City High. A total of twelve teachers taught both types of classes, and ten participated in the study.

The evaluation staff observed each of these teachers for two full periods on two consecutive days in both the mainstream and sheltered classes and then returned for two more days of consecutive observations in each class a week or two later. A follow-up interview was conducted with each teacher. Differences in teaching style, the amount of content covered, assessment measures, homework assignments and variations in student response patterns in the two types of classes were of particular interest.

School-by-school data are presented in order to highlight the differences which emerge because of variations in school size, population and location. It should be noted that class size numbers refer to the range of students present during the observations and do not reflect the number of students actually enrolled in the classes.

## SCHOOL 1

This school has a mix of Caucasian (39.1\%), African-American (29.8\%) and Asian ( $25.4 \%$ ) students. The student population is small (approximately 800 students). Sheltered classes are primarily composed of Asian LEP students. ESOL and content area teachers seem to work well together and communicate with each other about the students.

It should be noted that although three teachers at this school were teaching both mainstream and content area classes, the evaluator was unable to continue the study of the mathematics teacher because his English was incomprehensible. This teacher was one of the participants in the Temple University Bilingual Asian Teacher Training and Certification Program.

## TEACHER 1: AMERICAN HISTORY

Grades: Sheltered 9-12, Mainstream 9-10
ESOL levels = 2-4
Mainstream class size $=17-18($ Asian $=2)$
Sheltered class size $=15-26($ Asian $=13-20)$

## Teaching Experience

This teacher was teaching sheltered classes for the first time, although he had taught mainstream classes for thirty-one years.

## Content of the Lessons Observed

The content of the lessons observed was identical in both the sheltered and mainstream class. Two lessons dealt with a review of the American Revolution in preparation for the mid-term examination, and two lessons dealt with the Post-Revolutionary period and the Expansion to the West.

The teacher reported that throughout the year both sheltered and mainstream students rovered the same topics at the same points in time. Nothing from the Standardiced Curriculum was omitted in the sheltered classes.

## Differences in Teaching Techniques/Materials

The adjustments this teacher made to accommodate LEP students included: carefully defining terms, using new vocabulary in several contexts, pronouncing words, constantly reviewing concepts and vocabulary, and contextualizing information as much as possible by relating it to current events. In addition, this teacher used more visuals in the sheltered class. For example, there was a greater use of maps, more terms were put on the board, the teacher drew on the board and also used an overhead projector which he did not use with the mainstream class. Both classes used the same text: Exploring Our Nation's History (Globe, 1984).

## Student Differences

The teacher pointed out that while the LEP students needed more help with vocabulary and comprehension, the mainstream and sheltered classes were generally at the same point in the curriculum. During the observations, the sheltered class students were very serious about their work, while the mainstream students appeared more flippant and frequently talked to one another.

The teacher also indicated that the Asian LEP students sometimes participated more in class than the mainstream students because they were better prepared.

## Homework and Student Assessment

The observer noted that both groups were given identical homework assignments which consisted of readings and questions. With regard to student assessment, the teacher reported that students were assessed by means of weekly quizzes and unit tests every two or three weeks. He indicated that occasionally students were assigned research projects. All of these were marked on a curve for each class. Student marks also included $10 \%$ for participation in class and $10 \%$ for homework.

## Student Difficulties

The teacher indicated that six or seven of the Asian students in the sheltered class haci reading comprehension problems. Spelling and grammar in general were weak for most of the ESOL students but this did not interfere with their learning of the subject matter. He felt that a course dealing with academic reading was needed. He ad $\pm$ that he personally got to school at 7:30 a.m. every morning so that he could give the ESOL students extra help. There were usually ten to fifteen students waiting for him every morning. Most of the questions they had were about concepts that they had not understood in class or in their readings.

## TEACHER 2: SCIENCE AND TECHNOLOGY

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Grades: Sheltered 10-12, Mainstream 11-12
ESOL Level \(=3\)
Mainstream class size \(=9-13(A \operatorname{sian}=0)\)
Sheltered class size \(=10(\) Asian \(=7)\)
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## Teaching Experience

This teacher was in his first year of teaching in the School District of Philadelphia. This was also his initial year of teaching.

## Content of the Lessons Observed

In the mainstream class, two lessons were devoted to reviewing types of energy and ways of measuring heat for the upcoming mid-term examinations. The next two lessons dealt with a new unit on ecology and the pollution of the environment. In the sheltered class, all four lessons were spent on introducing students to the use of computers and their functions. The teacher reported that although the curriculum was the same for both classes, the sheltered class was about a month behind the mainstream class.

## Differences in Teaching Techniques/Materials

In both the sheltered and mainstream class, this teacher would have a question and answer period, would use equipment for demonstrations and gave examples to illustrate points. The observer noted that the teacher spoke quickly and colloquially in both classes. In the sheltered class, he asked more questions of the students to ensure understanding, wrote definitions on the board and tended to use more examples than in the mainstream class. When concepts were not clear for LEP students, he demonstrated with visuals or objects. He also spent more time helping sheltered class students with vocabulary, pronunciation and reading comprehension using examples which were relevant to the students' experiences. In the interview, the teacher noted that he tended to "water down" the technical vocabulary in the sheltered class. Both the mainstream class and the sheltered class used the same textbook: General Science: A Voyage of Exploration, (Prentice-Hall, 1989). This text is written at a 5 th to 6 th grade reading level.

## Student Differences

In both classes, students appeared to be familiar with the material and were able to respond to the teacher's questions. The teacher noted that the Asian students in
the sheltered class were sometimes better prepared than the mainstream students. The observer noted that students in the sheltered class were responsive and asked questions of the teacher.

## Homework and Student Assessment

Homework for both sheltered and mainstream classes consisted of questions based on readings or a reading assignment. The teacher indicated that he gave greater quantities of homework to the mainstream students. In the interview, the teacher reported that he collected written homework and marked it. He also gave quizzes every week and tests every two weeks. He assigned student marks according to the curriculum guidelines, but indicated that he was more lenient with the sheltered class students than the mainstream students in terms of speiling and grammar. In addition, if an LEP student was two or three points away from the cut-off point for a particular mark, he reported that he would give him/her the higher mark.

## Student Difficulties

Students in the sheltered class were observed having some difficulty with reading aloud. There were many new technical terms as well as non-technical words that were unfamiliar to them. The teacher noted that most of these students had problems with spelling and grammar. He also noted that most of the Asian LEP students in his class had difficulties with reading and comprehension.

## SUMMARY OF FINDINGS FOR SCHOOL 1

The two teachers at this school who participated in the study were a veteran and a first year teacher. Both teachers covered the same content and used the same textbook in their mainstream and sheltered classes, although the Science and Technology teacher indicated that his sheltered class was one month behind the mainstream class. Both teachers made substantial modifications in teaching the sheltered classes to promote understanding, and also made greater use of visual aids in these classes. Although homework and assessment measures were similar for both mainstream and sheltered class students, both teachers made allowances for the LEP students by either marking on a curve or being lenient with spelling and grammar. Both teachers noted that despite the fact that the Asian LEP students had problems with reading, spelling and grammar, they were more serious about their work, were better prepared and were generally more responsive than the mainstream students.

## SCHOOL 2

This school is a large multi-ethnic school. More than 3,000 students attend this school. The student composition is $52.2 \%$ African-American, $27.9 \%$ Hispanic, $12.4 \%$ Asian and $7.3 \%$ Caucasian. The LEP population is predominantly Hispanic. Asian LEP students are in the minority. Students in sheltered classes seem to interact very well with each other.

## TEACHER 1: WORLD HISTORY

Grades: Sheltered 9-12, Mainstream 9-11
ESOL levels $=2-3$
Mainstream class size $=14-24($ Asian $=0)$
Sheltered class size $=24-30(A \operatorname{sian}=6)$

## Teaching Experience:

This teacher had been teaching social studies for twenty years. This was his second year of teaching sheltered classes.

## Content of the Lessons Observed:

The content of two of the lessons observed in the mainstream class was Ancient African Kingdoms. Two later lessons were about North American Indian Civilizations. In the sheltered class, two lessons covered Ancient Rome and two lessons were about the Crusades. The teacher reported that the same units were always taught to both classes, but more time was spent on a unit in the mainstream class due to the depth of the material covered.

## Differences in Teaching Techniques/Materials:

In both the mainstream and sheltered classes a lecture format was used by the teacher with little or no participation from the students. This teacher was observed teaching at a rapid pace in both classes. His explanations were given so rapidly that the observer felt that students in the sheltered class did not have a chance to absorb their meaning. The teacher interview revealed that this teacher believed that his language should not be altered to suit the needs of LEP students, since they were "going to have to learn English the way everyone else does."

Both classes used the same texts: World History for a Global Age (Globe, 1985) and Maps Unfold the World (Milliken 1991). In both classes the teacher provided textbook outlines on the blackboard and referred to the maps in the textbook. According to the teacher, the sheltered class covered the highlights of each chapter of the textbook, while the mainstream class covered the entire chapter. He also indicated that he depended more on map study and textbook use in the sheltered class. Students in both classes were required to take notes and were given a daily handout with questions which they turned in at the end of the period.

## Student Differences

In both classes, students were inattentive and undisciplined. The teacher seemed oblivious to the noise level and to students throwing things. He would ignore these infractions and continue to teach at a rapid pace. Of the two groups, the sheltered class appeared somewhat more attentive and motivated. This was particularly true of the Asian students in the class. It should also be noted that the sheltered class was always larger ( 24 to 30 students in attendance) than the mainstream class ( 14 to 24 students in attendance) because of higher absentee'sm in the mainstream class. The teacher was very concerned about the size of the sheltered class.

## Homework and Student Assessment

Homework assignments consisted of handwritten study guides which were given to sheltered class students on a daily basis and to mainstream students on a weekly basis. These contained questions which were completed at home and returned to the teacher for marking. The teacher reported that student marks were based on Unit Tests ( $33 \%$ ), homework (study guides) and quizzes ( $33 \%$ ), classwork ( $33 \%$ ), and notebook accuracy and neatness ( $1 \%$ ).

## Student Difficulties

The teacher indicated that the Asian LEP students were more reluctant to participate orally. He felt that both LEP students and mainstream students had writing and speaking problems.

## TEACHER 2: GENERAL PHYSICAL SCIENCE (GPS)

Grades $=$ Sheltered 9-11, Mainstream 9-11
ESOL levels $=2-4$
Mainstream class size $=19-22($ Asian $=0)$
Sheltered class size $=20-25$ (Asian $=6$ )

## Teaching Experience

This teacher had been teaching General Physical Science for ten years. This was his first year of teaching a sheltered class.

## Content of the Lessons Observed

The content of the lessons observed in both mainstream and sheltered classes was identical. Students dealt with concepts such as: motion, gravity, acceleration and velocity. The teacher reported that the material covered was always the same for both classes.

## Differences in Teaching Techniques/Materials

In both the mainstream and the sheltered class the lessons were centered around students reading passages aloud from the textbook, followed by short explanations from the teacher. Then students were instructed to do written assignments from the textbook. In the sheltered class the teacher occasionally took time to explain a difficult word and encouraged students to interpret for each other.

Both classes used the same textbook: Focus on Physical Science (Charles Merrill, 1984). No other materials were used but the textbook in all eight lessons observed. This teacher did not make use of visual aids or hands-on techniques.

## Student Differences

The observer noted that sheltered class students tended to be more attentive to the teacher than mainstream students. In both classes, students only answered questions when called on. The teacher felt that the Asian students were well-behaved, completed their assignments and showed respect.

## Homework and Student Assessment

Homework questions for both the mainstream and sheltered classes were assigned from the textbook. Students used their class notes, since they were not permitted to take the textbooks home because there were only thirty-one copies for approximately one hundred students. The teacher reported that he assigned student marks based on: tests, homework, class assignments (from textbook) including neatness and accuracy, class participation, recitation, cooperation and attendance. He indicated that he sometimes permitted open-book tests for the ESOL students while the mainstream students took closed-book tests.

## Student Difficulties

The observer noted that the sheltered class students had difficulty reading aloud and had trouble expressing themselves. The teacher indicated that these students had difficulty with vocabulary and pronunciation. He felt the textbook was too difficult for them. He was of the opinion that newly arrived ESOL students should be placed in a special education class because they are "language handicapped".

## TEACHER 3: GENERAL PHYSICAL SCIENCE (GPS)

Grades: Sheltered 9-11, Mainstream 9-10
ESOL levels $=2-4$
Mainstream class size $=15-21($ Asian $=0)$
Sheliered class size $=21-26($ Asian $=6)$

## Teaching Experience

This teacher had been teaching science for twenty-seven years. This was his second year of teaching sheltered classes.

## Content of the Lessons Observed

The content of the lessons observed was identical in both the mainstream and sheltered class. Students learned about molecules, compounds, chemical reactions and equations. The teacher reported that he always taught the same lesson in both classes.

## Differences in Teaching Techniques/Materials

This teacher would begin each lesson with a thorough review of the material covered in the previous lesson. When he asked questions, he rarely gave the students an opportunity to respond. He employed the lecture method across all eight observations. In the sheitered class, he did not alter his language, but was observed teaching at a slower pace and providing more detailed descriptions. Other than diagrams on the blackboard, no visual aids nor hands-on techniques were used.

The same text was used for both classes: Focus on Phusical Science (Charles Merrili, 1984). Tracher-made worksneets were also distributed.

## Studic. t Differences

The observer noted that students in both classes were disruptive, with the exception of the Asian students who were well-behaved. The teacher spent a lot of time reprimanding students and his teaching style (lecture method) did not encourage student participation. In the interview, he indicated that he felt the sheltered class size was too large for effective learning to take place.

## Homework and Student Assessment

Students in both classes were asked to review their class notes for homework. The observer noted that no written homework was assigned, although the teacher indicated that he sometimes gave the students worksheets to be completed at home. According to the teacher, student marks were based on tests ( $70 \%$ for mainstream students; $80 \%$ for sheltered students), lab exercises ( $10 \%$ ) and class participation ( $20 \%$ for mainstream students; $10 \%$ for sheltered students). Passing and failing criteria were the same for both classes, however the teacher indicated that he took language problems into account before failing an ESOL student.

## Student Difficulties

The observer noted that sheltered class students had difficulty with their spoken English. The teacher reported that both sheltered and mainstream students had poor writing skills but that LEP students had greater difficulty because of their poor oral skills.

# TEACHER 4: GENERAL MATHEMATICS 1 

Grades: Sheltered 9-10, Mainstream 9-10
ESOL level $=2$
Mainstream slass size $=18-21($ Asian $=0)$
Sheltered class size $=27-30($ Asian $=7$ )

## Teaching Experience

This teacher was teaching sheltered classes for the first time, although he had taught mathematics for twenty years.

## Content of the Lessons Observed

The content of the lessons observed was identical in both the sheltered and mainstream class. Students dealt with fractions beginning with addition, followed by subtraction, multiplication, division and ended with reciprocals and mixed numbers. The teacher reported that both classes cover the same curriculum and that nothing is omitted or pared down in the sheltered class.

## Differences in Teaching Techniques/Materials

In both the sheltered and mainstream class, this teacher used a variety of techniques including lecturing, using diagrams and illustrations on the board, question and answer periods and whole class problem-solving. He also checked each student's work for accuracy before the end of each period.

The observer noted that the teacher taught at a slower pace in the shel ${ }^{1+2 r e d ~ c l a s s, ~}$ used more diagrams and illustrations, gave more detailed explanations and encouraged students to help each other. He would translate from time to time into French and Spanish for some students. He also used the brightest math student to assist him in checking and correcting students' work.

The text was the same for both classes: Mathematics in Life (Scott-Foresman, 1989). Students in the sheltered classes also had workt ooks of this same text so that homework assignments would be easier to comprehend.

## Student Differences

The observer noted that students in the sheltered class exhibited more positive behavior and seemed genuinely interested in what the teacher was saying. The mainstream students on the other hand, exhibited apathetic, non-caring attitudes. The teacher felt that the sheltered class was very large and needed to be smaller for more effective teaching.

## Homework and Student Assessment

Homework was assigned to mainstream and sheltered class students on a daily basis and emphasized problem-solving and reading skills. According to the teacher: "both of these skills are important in comprehending mathematics". Student marks were based on weekly tests ( $60 \%$ ), mid-term and final exams ( $10 \%$ ), and homework and classwork ( $30 \%$ ). The teacher noted that an " A " was the same for both groups. Marks in the B-D range differed for sheltered students because he took their limited reading ability into account when assigning a mark. The cutoff for failing was 65 in both groups. but he would not fail a sheltered student if he/she could demonstrate some knowledge of the material covered.

## Student Difficulties

Both the observer and the teacher noted that the sheltered class students had poor oral skills. In addition, the Asian LEP students tended to participate minimally, if at all, in class discussions. The teacher believed that this was due to shyness and cultural orientation, as well as oral skill proficiency. He also noted that both mainstream and sheltered class students had poor writing skills.

TEACHER 5: SOCIAL SCIENCE (ECONOMICS)

Grades: Sheltered $=11-12$, Mainstream $=11-12$
ESOL levels = 3-4
Mainstream class size $=18-29($ Asian $=6-7)$
Sheltered class size $=18-23($ Asian $=9-10)$

## Teaching Experience

This teacher had been teaching social studies for thirty-one years and had been teaching sheltered classes for five years. He indicated that he had volunteered to teach sheltered classes because he had experience dealing with Asian refugees and was interested in them.

## Content of the Lessons Observed

The content of the lessons observed was identical in both the mainstream and the sheltered class. The lessons centered around monetary policy, business cycles, taxation and the global economy. The observer noted that although the students dealt with the same topics in both classes, the teacher tended to avoid complicated details and difficult terminology in the sheltered class.

The teacher indicated that he felt the need for a specially tailored curriculum for sheltered classes which would give him more specific guidance in what was appropriate for LEP students. He felt he needed guidance in which language skills he should be developing and which aspects of the content were essential to cover. He also noted that he planned to teach a unit on government from a cross-cultural perspective.

## Differences in Teaching Techniques/Materials

The observer noted that this teacher explained complicated concepts in both the sheltered and mainstream class by using examples from the students' daily experiences and cultural backgrounds. He illustrated with the aid of diagrams, asked a lot of questions and encouraged students to respond to his questions. In the sheltered class, his pace was slower and he had students read vocabulary after him. He translated for those students who spoke Spanish or French, and would encourage the Asian students to interpret for each other. In the interview, the teacher reported that he moved at a faster pace in the mainstream class, used higher level language and introduced more complex concepts. He also indicated that the mainstream students used a text which was much more difficult than that used by the sheltered class students. The text used in the mainstream class was: Free Enterprise-The American Economic System (Laidlaw, 1981),
and in the sheltered class: Applied Economics (Junior Achievement,1985). The teacher was also observed using resources from magazines, newspapers and books.

## Student Differences

The observer noted that in both the mainstream class and the sheltered class, there was active participation from the students with the exception of the Asian students who tended to participate minimally.

## Homework and Student Assessment

In the interview, the teacher indicated that homework assignments were completely different for both classes. The mainstream students were given tasks such as writing essays, doing a content analysis and using multi resources such as the library. The sheltered class students were given worksheets and vocabulary exercises. The teacher indicated that he would check to make sure the work was done and determine whether students had copied it or done it theriselves.

Student marks were assigned differently in the two classes. Mainstream students received marks based on written tests, essays, projects and participation. Sheltered class students received marks based on practice tests and participation. The teacher noted that he tended to give less language-oriented tests to the sheltered class students and that he gave very few "A's" in either class. The cutoff points were the same for both classes.

## Student Difficulties

The teacher felt that many of the ESOL students had been assigned the incorrect ESOL level and really should not be in this class. He noted that they had reading, speaking, writing and listening problems and that very few could write an essay.

## SUMMARY OF FINDINGS FOR SCHOOL 2

All five teachers at this school who participated in the study were experienced teachers. All but one had twenty or more years of teaching experience. Student attendance in the sheltered classes often exceeded the attendance in comparable mainstream classes. Three of the five teachers used a predominantly non-interactive style of teaching, two choosing lecture and one textbook-dependent methods. Rarely did these teachers give students an opportunity to participate in discussion. They made no use of visual aids or hands-on techniques, and made few, if any modifications in their teaching to accommodate the needs of LEP students. Two teachers made remarks such as a
reference to LEP students being treated as handicapped special education students that indicated an intolerance of sheltered class students' needs. Not surprisingly, the two teachers who lectured for most of the time had discipline problems in both the mainstream and sheltered classes.

The two remaining teachers, modified their teaching to accommodate LEP students by using a variety of techniques to make the information more comprehensible, including explanations using every day examples, using diagrams and illustrations, asking questions of students and encouraging students to help each other. Unlike the other teachers, these two teachers had also either selected different texts for the LEP students or provided them with an accompanying workbook. Both made accommodations in their methods of assessing LEP students.

All five teachers pointed out that both mainstream and sheltered class students had writing problems, but that sheltered class students experienced more difficulty because of their oral language skills. Asian students in both mainstream and sheltered classes were described as well-behaved, interested and attentive but their oral participation in class was minimal.

## SCHOOL 3

This school has approximately 1,800 students, who are predominantly AfricanAmerican ( $90.4 \%$ ). Of the 134 ESOL students, 90 are Asian.

## TEACHER 1: AMERICAN HISTORY

Grades: Sheltered 9-12, Mainstream 10-11
ESOL levels $=2-4$
Mainstream class size $=20-28$ (Asian=3)
Sheltered class size $=14-16($ Asian $=6-10)$

## Teaching Experience

This teacher had nineteen years of teaching experience. This was his second year of teaching sheltered classes.

## Context of the Lessons Observed

The mainstream class was observed covering the Early 20th Century, while the sheltered class dealt with the Civil War. The teacher indicated that the sheltered class was one unit behind the mainstream class.

## Differences in Teaching Techniques/Materials

The teacher was observed interacting minimally with the mainstream class and tended to assign seatwork after a brief review. In the sheltered class, on the other hand, he was observed starting classes with a review of the materiai, introducing new vocabulary on the board, presenting concepts, defining terms carefully, giving student-relevant examples and asking questions.

When questioned about this difference, the teacher indicated that the mainstream class had such a high absence rate that he found it difficult to plan lessons. In contrast, he noted that the sheltered class students attended every day. However, it should be noted that during the observations this was not the case. Of the approximately thirty students on roll in each class, many mure mainstream students were in attendance than sheltered class students.

The text used in the mainstream class was Old Hate-New Hope (Scholastic, 1988). The teacher explained that students in this class were not permitted to take the textbooks home because of the high rate of textbook loss due to student turnover. The sheltered class used Foundations in American History, Vol. 1 (Globe, 1987) and students were permitted to take the books home.

## Student Differences

The observer noted that the sheltered class students were more dynamic. Students were actively taking notes, looking at their texts for information and asking questions. In the mainstream class, once students completed their seatwork, they would spend the rest of the time talking. The teacher would not make any effort to control them.

## Homework and Student Assessment

Homework consisted of questions based on readings. This work was handed in to the teacher who marked it. Student marks were based on tests and quizzes ( $50 \%$ ), and homework and classwork ( $50 \%$ ). The teacher indicated that he used the same criteria for both groups. He noted that the sheltered class students were performing better than the mainstream students because they were better prepared and did their homework regularly.

## Student Difficulties

Although the teacher indicated that the sheltered class students had difficulties with their spoken English, he felt they had no difficulty with their written English.

## TEACHER 2: BIOLOGY

Grades: Sheltered 9-10, Mainstream 9-10
ESOL levels $=2-4$
Mainstream class size $=17-18$ (Asian $=3$ )
Sheltered class size $=19-21$ (Asian $=7-12$ )

## Teaching Experience

This teacher had taught at this school for eighteen years, and had taught sheltered classes for thirteen years. The principal had originally assigned him to teach sheltered classes because he thought this teacher, who is foreign born, would have an affinity with LEP students.

## Content of the Lessons Observed

The context of the lessons observed was identical in both the mainstream and sheltered classes. Students dealt with a unit on Non-Animal Organisms, specifically plants. They studied the functions of roots, seeds, stems and their technical ferms.

## Differences in Teaching Techniques/Materials

In the sheltered class, the lessons observed began with a brief review, then the teacher presented new concepts, asked questions about previous readings and used the board to write down new terms. In addition, the teacher brought in plants and roots to show the sheltered class students and introduced them to an in-class greenhouse. Students were going to plant seeds and keep track of the light and water conditions and report their findings.

In the mainstream class, the lessons observed were based primarily on seatwork assignments. For the most part, these assignments required students to write answers to questions in the textbook. The vocabulary covered tended to be more complex than in the sheltered class, and there was more in- depth treatment of the topic. When the teacher was interviewed, he attributed the difference in his teaching techniques in the mainstream class to the fact that the mainstream class was a very low class and that students were frequently absent so that it was difficult to plan lessons for them. For this reason he felt that he needed to give the mainstream students independent work that they could do individually.

The texts used in each class differed. The mainstream class used: Modern Biology, (Holt, Rinehart, 1985). The sheltered class used Concepts and Challenges in

Life Science, (Globe, 1989) which contained simpler diagrams, simpler language, largetype headings and more frequent reviews than the text used in the mainstream class.

## Student Differences

The observer noted that the sheltered class students appeared $w$ be more enthusiastic and more focused, whereas the mainstream class students would finish their written assignments as quickly as possible so that they could talk to each other. The teacher indicated that the sheltered class students worked harder than the mainstream students and were learning the material better, despite their language difficulties.

## Homework and Student Assessment

The observer noted that homework for the mainstream class consisted of questions students copied from the board which they weiŋ required to answer from their class notes. For the sheltered class, the teacher provided students with photocopied pages from their textbook. The homework questions were more guided for these students. In the teacher interview, the teacher indicated that students were not permitted to take books home because of the high rate of textbook loss due to student turnover.

In terms of student assessment, the teacher reported that students were given tests every ten days, as well as open-book tests and research projects which required written laboratory reports. Student marks were based on curriculum guidelines and included marks on tests, projects, homework and class participation. The teacher indicated that he gave sheltered class students more leeway in terms of grammar and spelling. He also reported that if sheltered class students worked hard and showed progress he was more lenient about passing them.

## Student Difficulties

The observer noted that sheltered class students had difficulties with vocabulary, grammar and spelling but these did not seem to interfere with the students' mastery of the course material.

## SUMMARY OF FINDINGS FOR SCHOOL 3

At this school, the two teachers in the study had eighteen or more years of eyperience. Both employed interactive modes of teaching with the sheltered classes, but not with the mainstream classes. When questioned about this, both teachers reported that attendance in the mainstream classes was too crratic to enable them to plan lessons. In
teaching the sheltered classes, these teachers made accommodations to meet the needs of LEP students by constantly reviewing previously taught material, introducing new vocabulary, defining terms and concepts carefully, and using the board to write them down.

Although the American History teacher did not use visuals or hands-on techniques, the Biology teacher brought in examples of roots and plants to show the students and had plans for hands-on activities. Both teachers used a different text in the sheltered classes which they deemed more appropriate for LEP students, and students could either take the texts home or were provided with photocopied pages of the text.

These teachers used essentially the same student assessment techniques for both sheltered and mainstream students. Both teachers indicated that the sheltered class students, despite their language difficulties, were learning the material better than the mainstream students because they were more focused and did their homework regularly.

## SCHOOL 4

There are approximately 1,572 students at this sciool, of whom $47.7 \%$ are African-American, $27.4 \%$ are Caucasian and $22 \%$ are Asian. The LEP population is predominantly Asian.

It should be noted that there were two content area teachers at this school who were to be included in the study. However, the American History teacher who had a mainstream and sheltered class was eliminated from the study because his mainstream class was being taught by a student teacher for six months.

## TEACHER: BIOLOGY

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Grades: Sheltered \(=9-12\), Mainstream \(=10-11\)
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ESOL levels $=2-4$
Mainstream class size $=11-12($ Asian $=1)$
Sheltered class size $=5-16($ Asian $=5-14)$

## Teaching Experience

This teacher had been teaching Biology for seventeen years, and had taught sheltered classes for four years.

## Content of the Lessons Observed

The content of the lessons observed was identical for both the mainstream and sheltered class. The students dealt with Animal Organisms, specifically the characteristics of fish, frogs and birds. The teacher also showed students a film about dissecting a frog to prepare them for future lab work.

## Differences in Teaching Techniques/Materials

The observer noted that this teacher interacted constantly with the students in both the sheltered and mainstream class by giving explanations and asking many questions. In the sheltered class, he often asked students to repeat words after him, gave more examples and more detailed explanations than in the mainstream class. In the interview, the teacher also noted that he slowed the pace of his teaching in the sheltered class to check student understanding.

This teacher used a variety of visual aids in both classes such as films, models of animals, pictures and diagrams on an overhead projector. In a lesson dealing with birds, he demonstrated the energy provided by a seed by burning it. The textbook used in both classes was Modern Biology (Holt, Rinehart, 1981). However, the teacher indicated that he used the text on a limited basis, mainly as a reference. He did not feel that there was an appropriate text available for either the mainstream or ESOL students. Although sheltered class students were permitted to take the textbooks home, mainstream students were not because, according to the teacher, they were a constantly changing population.

## Student Differences

The observer noted that sheltered class students were more actively involved in the lessons than the mainstream students. Even two students who had recently arrived from Vietnam tried to answer questions. In the interview, the teacher indicated that the Asian students were attentive, participated very well and were performing better than the mainstream students.

## Homework and Student Assessment

The teacher reported that homework for both classes consisted of answering questions from the textbook or from their notes, defining vocabulary, doing reports which required library research and working on individual projects.

Student marks were based on tests, quizzes, reports and research projects. The teacher indicated that he expected the same quality of work from both classes, but that he was more lenient in the sheltered class with spelling and misuse of words.

## Student Difficulties

Sheitered class students had difficulty with their English pronunciation and the appropriate use of vocabulary and expressions.

## SUMMARY OF FINDINGS FOR SCHOOL 4

This teacher had seventeen years of teaching experience He used an interactive style of teaching in both the sheltered and mainstream class and constantly interacted with his students, asking many questions and succeeding in getting his students to participate orally. He took additional steps to ensure understanding in the sheltered class such as slowing his pace, giving more examples, more detailed explanations and had students repeat words. In both classes this teacher used a variety of visual aids, required students
to do library research and to work on individual projects. He indicated that he required the same quality of work from both mainstream and sheltered class students, but was more lenient about spelling and vocabulary with the LEP students. He also reported that the Asian LEP students were performing better than the mainstream students.

## CONCLUSIONS

A total of ten content area teachers of sheltered and mainstream classes participated in this phase of the study. The findings show that sheltered class students were exposed to essentially the same curriculum as their mainstream peers regardless of subject. Seven of the ten teachers also used the same text for both mainstream and sheltered classes; six assigned the same homework to both types of classes, and eight used the same assessment measures for both classes. Most of these teachers reported that they made allowances for the LEP students' grammar and spelling difficulties when assigning report card marks.

In all but one case, these teachers were experienced teachers, and most (seven) made modifications in their teaching to accommodate the needs of LEP students. However, fewer than half of the teachers made use of visual aids, props or equipment to facilitate the contextualization of information, and even fewer engaged the students in hands-on activities or cooperative learning activities. These techniques are recommended for LEP students to facilitate student learning and comprehension and to promote oral language development.

Some interesting differences emerged by school. At one school, teachers performed well with the sheltered classes but seemed to interact minimally with the mainstream classes. At the largest high school in the study, three of the five teachers made few modifications to meet the needs of LEP students, used lecture or textbook dependent methods in both mainstream and sheltered classes and conducted noninteractive lessons, giving students little opportunity to participate in discussion. This was the only school in the study where Asian LEP students in all five sheltered classes participated minimally in oral discussion. Teacher style contributed to this, but other contributing factors may be the large size of the sheltered classes and the fact that the LEP population is predominantly non-Asian. At the remaining two schools, the teachers appeared to be teaching both sheltered and mainstream students well. It is worth noting that one of these teachers was a newly appointed teacher who had no previous teaching experience.

## RECOMMENDATIONS

Some attention needs to be paid to the program at the largest high school in this study. Sheltered classes with high attendance figures may be coun eerproductive to meeting the needs of LEP students. In addition, some of the teachers at this school may
need some individualized staff development to modify their teaching styles with LEP students.

The findings also indicate that there is still a need to provide intensive staff development for sheltered class teachers in techniques such as cooperative learning, hands-on activities and the use of visual aids, props and audiovisual equipment. On-site professional development may be needed, since so few content area teachers avail themselves of the centralized professional development workshops that are offered. Some thought also needs to be given to what incentives would motivate teachers to use these techniques.


[^0]:    * An Assessment of Professional Development Workshops and the Status of Peer Coaching in New Instructional Model Schools, 1991-1992. School District of Philadelphia. Report No. 9300.

