

## Introduction

North Carolina has embraced a tremendous, but necessary, challenge to close achievement gaps between and among various populations of its public school students across the state. The goal that drives this effort is simply “every student in school and making strong progress.” It is important that all North Carolina students upon completion of high school are considered well educated and capable of responding to the challenges that await them either in college/university or in the workforce.

To close the achievement gap, it will take the sincere efforts of many stakeholders across our state and nation. These stakeholders include parents, students, school personnel, legislators, state officials representing many agencies, and a variety of other personnel and officials closely related to the education of our youth and their physical, emotional and intellectual development.

Many challenges confront these stakeholders, but the ultimate rewards are worth the effort. The information shared here reflects only a beginning discussion of key components surrounding the achievement gap that exists between and among students in North Carolina public schools.

The student populations in our public schools are rapidly changing and demonstrate both ethnic and cultural differences. Many of the students within the ranks of our public schools are sadly lagging behind in performance achievement as measured by our state’s standards of proficiency. Disproportionately, minority and at-risk students consistently perform below expected standards of academic proficiency. This dilemma must be addressed in a systematic, thorough manner.

Key stakeholders can make positive strides toward closing the academic achievement gap among groups of students. If it takes a whole village to raise a child, then in North Carolina there is already “movement in the village.”

**“We are simply seeking to bring into full realization the American dream—a dream yet unfulfilled.”**

-Martin Luther King, Jr.

***“We can whenever and wherever we choose, successfully teach all children whose schooling is of interest to us. We already know more than we need in order to do this. Whether we do must finally depend on how we feel about the fact that we haven’t so far.”***

-Ron Edmonds

## **The Achievement Gap: A Definition**

The achievement gap is a persistent, pervasive and significant disparity in educational achievement and attainment among groups of students as determined by a standardized measure. When analyzed according to race and ethnicity, achievement disparities negatively impact educational outcomes for poor children and children of color on a consistent basis.

***“If we say, children don’t learn at home what they need to succeed in school, that may be true. However, we can’t let that be an excuse for failing to provide what they need. If they don’t get adequate teaching at home, we teach them.”***

Abrahams, Roger D. and Troike, Rudolph C.  
*Language and Cultural Diversity in American Education*

## **Variables Affecting Student Achievement**

In the United States, students from ethnic minority backgrounds have experienced varying levels of academic achievement in schools. The literature identifies many factors that might account for the variance in achievement including individual attributes as well as those of the school, home, community and society. Variables associated with each of these factors influence the academic achievement of all student populations. However, it is clear that their combined effect results in a significant disparity in the level of achievement among White, Asian, African American, Native American and Hispanic student population groups.

It is clear from research that with the exception of Asians, many minority students tend not to perform at the same level on achievement tests as White students. This disparity probably exists because of a variety of factors, some of which are presented in this section. While this list is not exhaustive, seven of the most common factors believed to affect student achievement as presented in the literature are discussed.

### **School Practices**

School practices are consistently identified in the literature as affecting educational outcomes for minority students. Such practices as the assignment of teachers, teacher expectations, learning opportunities, disregard for learning styles and retention/suspensions have a profound impact on the academic achievement of minority students.

Teacher quality as determined by education, experience, expertise and licensure has been shown to be the single most significant factor contributing to student achievement. Research dating from the early 1990s reveal that teachers' expertise-as measured by scores on licensing examinations, higher-level degrees, and experience-account for a significant proportion of the measured variance in students' reading and mathematics achievement scores. Other research on the impact of teacher quality on student achievement revealed that students' exposure to successive years of poorly qualified teachers during the formative educational stages impacts achievement long-term. Yet, the research also shows that students from low-income and minority communities are often served by the least qualified teachers (Ferguson, 1998; Sanders & Rivers, and the Education Trust, 1998).

Teachers' expectations have been found to have a significant impact on student achievement. According to this theory, low teacher expectations of minority students results in a self-fulfilling prophecy, contributing to significant achievement gaps between minority and non-minority students (Ferguson, 1998; Goode, 1981; Goodlad, 1984; Ladson-Billings, 1994).

A number of researchers find that students not exposed to rigorous course work tend not to perform as well in school as those with such exposure. In general, minority students tend to be under represented in advanced placement courses and over represented in special education programs. This trend starts in elementary school and continues through

high school (Castellino, Darity and Tyson 2001). Several researchers have theorized that schools might inadvertently contribute to the achievement gap as illustrated by those serving large numbers of minority students placing more emphasis on multicultural curriculums than preparing students for enrollment in advanced courses. In the same context, a decline in leisure reading among minority students during the last two decades has been accompanied by a decline in reading scores (Ferguson, 1998; Osborne, 1998).

## **Preschool Education**

The literature has identified the lack of quality preschool education for minority children as a factor contributing to the achievement gaps between ethnic minority and White students. Based on evidence from the National Longitudinal Survey of Youth (1998), many minority children start school with academic preparation that lags behind their White counterparts. In an analysis of data from this survey, a comparison of the level of readiness between African American and White students found that the two groups were very similar when compared on motor/social and verbal memory skills. However, there was a significant difference between the two groups on a measure of vocabulary skills. According to some estimates, only about 63 percent of African American and 37 percent of Hispanic children participate in preschool programs staffed by early childhood professionals.

## **Summer Effect**

Studies have shown that the lack of academic engagement during the summer negatively impacts educational outcomes for poor children. Children from more affluent backgrounds continue to be engaged in learning activities (vacations, camps etc.) during the summer months, while for poor children this tends to be a time of academic disengagement. Overtime, the lack of learning opportunities resulting from the **summer effect** can be substantial (Alexander, 1987).

## **Parental Expectations**

A number of researchers have identified parental expectations as significant to student performance in school and critical to student academic achievement. High expectations from parents are generally associated with higher levels of educational attainment. Effective parenting practices associated with high levels of academic achievement include expectations that children earn high numerical grades on schoolwork. In addition, the research suggests that child rearing beliefs, provisions for academically enriching home environments, and standards of acceptable behavior in and out of school are equally important to academic achievement (Jencks and Phillips, 1998; Okagaki and Frensch, 1998, Wong, 1990).

## **Parental Education and Socioeconomic Status**

Parental education and social economic status have an impact on student achievement, although the exact nature is not clear. Phillips (1998) found that parental education and family socioeconomic status alone are not good predictors of student academic achievement. Ferguson (1991) posited that parental education accounted for about twenty-four percent of the variance in students test scores, while socioeconomic status accounts for about twenty-six percent. Other researchers contend that dysfunctional home environments, low parental expectations, ineffective parenting, language differences and high levels of mobility might account for lower levels of academic achievement among students from lower socioeconomic backgrounds (Frymier and Gansneder, 1989; Laosa, 1978).

## **Lack of Congruence between Home and School Culture**

Congruence between home and school culture is a good predictor of student academic achievement. Students tend to be more successful when their home and school cultures are similar. Conversely, they tend to be less successful when there is a disconnection between the home and the school culture. The movement from the familiar environment of the home to the unfamiliar environment of the school can result in a disconnection for many minority and low-income students. The way to minimize or eliminate this disconnection is for schools to work with students and their families in adapting to the school culture (Delgado-Gaitan, 1992; Trueba, 1988; Wells, 1990).

## **Societal Discriminatory Practices**

Societal discrimination against minority groups may have contributed to the emergence of an oppositional paradigm that does not accept the traditional concept of achievement. Steele (1997) theorized that African American students might not perform well on standardized tests due to **stereotype threat**. This is a phenomenon whereby a student's test performance is believed to be impaired out of fear of confirming a negative racial stereotype. White and Johnson (1994) note that early in their lives minority youth become aware of the fact that they do not inherit the same educational and career choices as non-minority students. This results in these youth not identifying with academics and seeking other means of demonstrating competency and achievement (Osborne, 1999). Several researchers point to the rise of "**Hip-Hop**," which tends not to emphasize traditional academic achievement, as a form of cultural identify among African American youth as evidence of this paradigm. Other researchers theorize that African American, and to some degree many students from involuntary minority groups, tend not to identify with academic achievement out of concern for being accused of "acting white". From this view, doing well in school is seen as something that only whites do and questions ones identify as a member of the black community. Minority students from low-income backgrounds may perceive the school culture as being designed to make them assimilate into to mainstream culture. According to the theory, assimilation is not desirable and viewed as insulting because it is perceived as rejecting ones' cultural identify. Therefore, academic achievement is not emphasized. (Ferguson, 1998; Ogbu and Fordham, 1986).

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# The Achievement Gap

## The National Overview

- ❑ The U.S. Department of Education reported in 2000 that the ethnic and racial achievement gaps among students in math, reading, and science have either widened or stayed the same in the 1990's.
- ❑ By the time students enter kindergarten, the black-white gap is already about half its ultimate size.
- ❑ According to the 2000 NAEP report, by the end of grade 4, African American, Latino and poor students of all races are already about two years behind other students.
- ❑ NAEP also reports that by the time students reach grade 8, African American, Latino, and poor students are about three years behind other students.
- ❑ Ninety percent of Whites and ninety-four percent of Asians complete high school or earn a GED while eighty-one percent of African Americans and sixty-three percent of Latinos, in the same age group, have earned a high school diploma or GED.

## Reading

- ❑ Only 1 in 50 Latinos and 1 in 100 African Americans 17 years old can read and gain information from specialized text such as the science section in the newspaper compared to 1 in 12 Whites.
- ❑ Fewer than one-quarter of Latinos and one-fifth of African Americans can read the complicated but less specialized text that more than half of White students can read.

## Mathematics

- ❑ About 1 in 30 Latinos and 1 in 100 African Americans can comfortably do multistep problem solving and elementary Algebra, compared to 1 in 10 White students.
- ❑ Only 3 in 10 African American and 4 in 10 Latino 17 year-olds have mastered the usage and computation of fractions, commonly used percents and averages compared to 7 in 10 White students.

## **The North Carolina Commitment**

- ❑ In 1999, Governor Jim Hunt issued a challenge to the state to become the best system of public schools of any state in America by 2010.
- ❑ State Superintendent, Mike Ward, brought focus to the challenge set forth by Governor Hunt by initiating a Ten-Step Plan to raise achievement levels and close achievement gaps by 2010.
- ❑ An Advisory Commission on Raising Achievement and Closing Gaps was established under the direction of Dr. Robert Bridges, former superintendent of Wake County Schools.
- ❑ NC Department of Public Instruction created a new section, Closing the Achievement Gap, within the Division of School Improvement to address issues related to maximizing student potential and closing achievement gaps.
- ❑ Several research documents related to minority achievement in NC were released between 2000-2001: *A View From the Nine, Reporting on Increasing Opportunity to Learn via Access to Rigorous Courses and Programs, Minority Achievement Report, and Eliminating The Black-White Achievement Gap: A Summary of Research.*
- ❑ The Education First Task Force was set up by Governor Mike Easley in 2001 to look at high-performing, high poverty schools across the state that are consistently moving all cohorts of students toward the charge to become the best system of public schools of any state in America.

## **Reading Overview**

- ❑ Among NC 4<sup>th</sup> graders, white students have scored notably higher on the National Assessment of Educational Progress (NAEP) reading assessment than Blacks and Latinos in 1992, 1994, and 1998.
- ❑ NAEP reading results for all subgroups have not differed markedly since 1992.

## **Mathematics Overview**

- ❑ NC was recognized for its achievements in mathematics following the 2000 NAEP assessment. The gap in mathematics achievement has narrowed but still remains too wide.
- ❑ The percentage of White and Black students performing at the proficiency level has increased. The performance of Latino and American Indian students has shown significant change in 4<sup>th</sup> grade.

- In grade 8 the percentage of White students performing at or above the proficient level increased in 2000 while Black and Latino students did not change significantly.



### **Resources:**

National Assessment of Educational Progress (1998, 2000)

NC End-of-Grade (2000). Raleigh: North Carolina Department of Public Instruction

NC End-of-Course (2000). Raleigh: North Carolina Department of Public Instruction

*NC Minority Achievement Report 2001*. Raleigh: North Carolina Department of Public Instruction

“Racial Gap in test scores not closing”, Dale Mezzacappa, *The Philadelphia Inquirer*, August 25, 2000.

“Closing the Achievement Gap”, Kati Haycock, *Educational Leadership* Volume 58 Number 6, March 2001.

“New Frontiers for a New Century-A National Overview”, Kati Haycock, *The Education Trust*, Volume 5 Issue 2, Spring 2001.

***“Some say it is unfair to hold disadvantaged children to rigorous standards. I say it is discrimination to require anything less.”***  
**-President George W. Bush**

<p align="center"><b>Challenging Students to a Higher Standard While Closing the Achievement Gap NC’s Ten-Step Plan</b></p>	<p align="center"><b>No Child Left Behind Act of 2001 National Initiative</b></p>
<ul style="list-style-type: none"> <li>o Close the gaps in percentages of students performing at grade level.</li> <li>□ Create a permanent advisory committee to the State Superintendent/Department to address issues related to high standards and closing performance issues.</li> <li>□ Provide technical assistance to schools and school systems to help close the gap.</li> <li>□ Require LEA to develop annual plans for closing gaps and raising performance levels. Conduct random reviews of these plans.</li> <li>□ Develop budget requests through 2003 for allocating funds to DPI, local school systems, and schools for use in closing gaps and raising performance.</li> <li>□ Direct \$4 million in Goals 2000 funds for 2000-01 to assist LEAs in closing the gap initiatives.</li> <li>□ Calculate change using ABC’s accountability program. Partner with the five local districts participating in pilot program that rewards schools for improving performance of subgroups of students.</li> <li>□ Seek funding and legislation to pilot dual language demonstration sites.</li> <li>□ Develop a resource center for information on best practices in closing gaps.</li> <li>□ Encourage local collaboration of all stakeholders to participate in public forums and take actions that support closing gaps and raising student performance.</li> </ul>	<ul style="list-style-type: none"> <li>□ All states are required to administer annual testing in reading and mathematics by 2005-2006.</li> <li>□ Science testing is required by 2007-2008.</li> <li>□ All states will participate in NAEP assessment in grades 4 and 8 every other year.</li> <li>□ All students at the proficiency level defined by the state within 12 years.</li> <li>□ Technical assistance will be provided for Title I schools failing to make progress in two years.</li> <li>□ Students enrolled in a Title I school that fails to make progress in two years will be allowed to attend another public school.</li> <li>□ Title I schools failing to make progress after three years must offer supplemental education services selected by the students’ parents.</li> <li>□ Title I schools failing to make progress after five years must be reconstituted.</li> <li>□ \$900 million to states and local districts to establish reading programs for children in grades K-3 (Reading First).</li> <li>□ Title I teachers must be fully licensed beginning 2002-2003.</li> <li>□ All teachers must be fully licensed by December 31, 2005.</li> <li>□ LEP students will be required to take state assessments in English after being in the U.S. for three consecutive years.</li> </ul>

The reauthorization of the Elementary and Secondary Education Act (ESEA), also known as the “No Child Left Behind Act,” was signed into law January 8, 2002. Several key parts of this new act were based on the accountability programs in North Carolina and Texas.

## **The Parent Involvement Component**

Evidence shows a strong connection between parent and family involvement in schools and children's academic achievement, attendance, attitude, and continued education. Research also suggests a connection between the school climate and the extent to which parents and families are involved in their children's education. Schools can be proactive in their approach to building parent partnerships to increase learning.

Traditionally, in education, it has been said that parents are our first teachers. Parent involvement is an essential component to children realizing success in school. Although it may vary at the building level, parental support may manifest itself in several forms.

### **Encourage Parent Involvement**

#### **Create goals for parent involvement including:**

- Creating a climate conducive to involving parents and families in their children's education;
- Making sure teachers and administrators understand the importance of a positive school climate in relation to family involvement;
- Providing staff development for teachers and administrators to foster a consistent approach for creating a positive school climate;
- Making family members feel welcomed in the school by letting them know they are valued and supported in their efforts to become more involved;
- Providing opportunities for parents to learn how to become more involved in their child's learning experiences; and
- Including parents in school governance and activities.

#### **Make the school family-friendly by:**

- Defining parent and family involvement for all stakeholders;
- Establishing a parent or family center within the school;
- Offering good, frequent, and user-friendly communication;
- Providing good after-school programs involving parents and community organizations;
- Organizing social activities for teachers and families;
- Providing parent education and family literacy programs; and
- Having programs to link families to needed health and social services.

**Define what the school wants from parents:**

- Seeing themselves as being the most important teacher in the life of their children;
- Helping their children value education by valuing it themselves;
- Teaching their children continuously, even during the school year;
- Laying the foundation for learning in the early years of their children's lives;
- Making sure the school teaches academic basics and sets high standards for all children;
- Teaching their children to respect the values and expectations of the classroom;
- Talking to teachers and other parents;
- Remembering they are the experts who best understands the needs of their children;
- Staying aware of what their children study and how well they learn what they study;
- Providing homework support;
- Encouraging children to persist when the work becomes difficult;
- Monitoring the amount of time their children watch television, play video games, spend on the computer, or other activities;
- Knowing the educational reforms available for their children; and
- Having high standards and expectations for their children's learning.

**Reach out to parents and families of at-risk students by:**

- Helping parents increase their knowledge of child development;
- Removing structural barriers to the school through home visits, having meetings in less formal and intimidating settings, and using written communication all parents can understand;
- Identifying and involving community groups interested in increasing family involvement;
- Facilitating parent-to-parent communication
- Making sure there is one person who knows every student well;
- Communicating regularly with parents in a variety of ways to keep them informed about their children's progress and school activities;
- Accommodating parents' work schedules and time constraints when creating parent-involvement opportunities;
- Learning culturally appropriate ways to communicate with diverse groups of parents without stereotyping;
- Teaching parents how to help their children with homework
- Encouraging parents to volunteer in the school;
- Providing opportunities for parents to learn with their children;
- Conducting community education classes in the school; and
- Writing a school policy statement delineating ways to ensure a positive school climate for family involvement.

“Some parents are reluctant to engage in their children’s education and may never perceive schools as friendly, accepting places. They may feel confused about typical school procedures and intimidated by the school staff. Other parents may believe that school provides hope for their children’s future but are uncertain how to become involved. Schools must make numerous and continuous attempts to reach reluctant families through a variety of means.”

Despite the all-encompassing demands on parents, developing productive and sustainable partnerships within our school communities is of utmost importance for **all** of North Carolina’s children.



***“Nothing should be overlooked in fighting for better education. Be persistent and ornery; this will be good for the lethargic educational establishment and will aid the whole cause of public education.”***

**-Roy Wilkins, Civil Rights Leader/Educator**

## Parents really want their child's teacher to be:

- Enthusiastic, energetic, happy, positive
- Competent, research-based, well read, confident
- Personable, communicative, respectful, welcoming
- Well-planned, honest, and understand the total school experience
- Student-centered:
  - Use different instructional approaches
  - Expect all children to perform everyday
  - Assign homework that is worthy and tied to the curriculum
  - Offer substantive feedback on student assignments and tasks

Adapted from: "What I Hope for in My Children's Teachers: A Parent's Perspective." *The Clearing House*. September/October 2001.

## **Tips for Parents**

- ◆ Make sure your child completes homework assignments.
- ◆ Schedule time for reading daily.
- ◆ Ask about upcoming tests—weekly.
- ◆ Schedule conference times with teachers.
- ◆ Visit the school regularly.
- ◆ Volunteer time or services whenever possible.
- ◆ Know your child's teacher.
- ◆ Encourage your child to do his/her best on a daily basis.
- ◆ Have high standards and expectations for your child's learning.
- ◆ Monitor the amount of time your child watches television.
- ◆ Encourage your child to persist when the work becomes difficult.
- ◆ If you are unable to help your child with schoolwork, ask the school for help.

## What Schools Can Do: Sensible Steps in Closing the Achievement Gap

June 2001 the North Carolina Education Research Council published a policy research brief detailing ten critical points that must be addressed to close the achievement gap between Black and White students in our public schools. Below is a brief description of those points.

**Extend high quality, academically-focused early childhood education to all children at risk of school failure.** High quality early childhood programs that focus on academic preparation can significantly reduce the gap and its lasting effects into future schooling.

**Ensure that African-American children are taught by able, well-prepared, experienced teachers.** Quality teachers assigned to the students who need the most academic support may be the most powerful immediate and long-term influence on student success.

**Reduce class size in the early grades.** Research for many years has produced evidence that small class size (18 or less) can produce large and lasting gains for all students.

**Adopt sound and equitable grouping practices in elementary schools.** Ability grouping as is commonly practiced does little to reduce the achievement gap. Sound equitable grouping practices can reduce the gap.

**Assure that African-American students are equitably represented across curriculum tracks in high schools.** Students who are in top tracks of curricula versus the students in lower tracks of curricula represent a difference in opportunity to learn. All students should be required to take challenging curricula.

**Bridge home and school cultures by adapting teaching and discipline practices to suit students' background.** Much research indicates that there are no unique teaching techniques that are especially necessary to teach African-American students. However, there are strong indicators that suggest that explicit, direct-instruction and discipline practices are beneficial.

**Find reasons to expect each student to succeed.** Find reasons to respect every student as "a valuable person." Search for students' strengths and talents.

**Demand success by holding both schools and students accountable.** Maintain high expectations for all students while also maintaining the spirit of accountability for schools and students.

**Support students with individual tutoring, more comprehensive reforms, summer programs, and follow-up assistance.** Trained tutors and volunteers can be a great

support for students who need extra help or more time to grasp concepts and information. Tightly organized summer programs aligned to the regular curriculum can be quite beneficial.

**Desegregate schools and programs within schools.** Both Black and White children in a thoroughly desegregated school environment get better teachers, more resources, and achieve at higher rates than do children in predominantly black schools.

Charles L. Thompson and Sam D. O'Quinn, III  
The North Carolina Education Research Council  
Eliminating the Black-White Achievement Gap: A Summary of Research  
June 2001

## **Teachers: A Critical Element in Closing the Achievement Gap**

Teachers and the work they do in schools and classrooms really do make a difference in the academic performance of minority and at-risk students. Recent large-scale studies provide convincing proof of this. The classroom teacher is probably the most significant factor in closing the achievement gap between and among students. The neediest students in our public school, especially, can benefit greatly from the instruction of a highly qualified, capable teacher.

Researchers point out that strong verbal and math skills, deep content knowledge, and teaching skill are three critical characteristics of an effective teacher (Eliminating the Black-White Gap, 2001).

Positive teacher expectations seem to be associated with greater student achievement. Many minority and at-risk students are greatly affected by their teachers' expectations and may even regard their teacher's perception more than their own (Garrett-Holiday, 1985).

Teacher attitudes and behaviors can significantly influence minority and at-risk student achievement. What can teachers do?

Teachers can:

- encourage and build strong self-image in students.
- foster a "Can do" attitude in students.
- exhibit a spirit of caring. Let students know you are interested in them as individuals.
- maintain high expectations for student performance.
- teach students the skills and strategies that they need to be successful.
- include higher-order thinking skills in instructional delivery and classroom activities. All students benefit from learning these skills.
- involve students in problem-solving tasks routinely and consistently.
- engage all students in meaningful classroom activities everyday.
- exhibit enthusiasm for learning tasks.
- ensure that students read and respond to various text formats routinely and consistently.
- provide specific, supportive feedback in a timely manner.
- use instructional strategies that reflect a variety of learning styles.
- use a variety of teaching styles.
- avoid academic tracking and provide equitable educational opportunities.
- use cooperative and flexible grouping arrangements.
- create a multicultural environment in the classroom.
- build on students' culture in classroom instruction and activities.
- develop positive teacher-parent relationships.

-Adapted from CNORSE: Improving Black Student Achievement

## Self-Assessment of Teacher/Student Interactions

**Teachers may consider the items on this checklist to assess how effectively they respond to diversity in the classroom. Place a check beside the items that best reflect your behavior. Reflect of the results.**

- \_\_\_\_\_ Am I careful not to prejudge a student's performance based on cultural differences, socioeconomic status or gender?
- \_\_\_\_\_ Do I promote high self-esteem for all children in my classroom? Do I help each child to feel good about who he/she is?
- \_\_\_\_\_ Do I encourage students to understand and respect the feelings of others who are different from them?
- \_\_\_\_\_ Do my students see me as actively confronting instances of stereotyping, bias and discrimination when they occur?
- \_\_\_\_\_ Given what I ask students to talk or write about, do I avoid placing value on having money, spending money or major products?
- \_\_\_\_\_ Do I put myself in the place of the limited-English-proficient student and ask, "How would I feel in this classroom?"
- \_\_\_\_\_ Do I make an effort to learn some words in the home languages that my limited-English-proficient students speak?
- \_\_\_\_\_ Am I conscious of the degree and type of attention I am giving to members of each gender in classroom interactions? Do I have an equitable system for calling on students?
- \_\_\_\_\_ Do I use gender-neutral language?

Adapted from Common Bonds: Anti-Bias Teaching in a Diverse Society. Deborah A. Byrnes and Gary Kiger, Editors. Association For Childhood Education International. Wheaton, Md. 2001.

## Recognizing and Respecting Cultural Differences

Under-girding a multicultural curriculum is the teacher's belief about the teaching and learning process. Consider the differences between a traditional education belief system and a multicultural system.

### Beliefs

<b>Traditional beliefs</b>	<b>Multicultural beliefs</b>
1. Natural selection theory	1. Talent can be developed
2. Excellence for a few	2. Excellence for all
3. Remediation programs	3. Prevention-Continuous
4. Pessimistic about learning	4. Optimistic about learning
5. Competitive learning	5. Cooperative learning
6. Exclusive programs	6. Inclusive programs
7. Mystery learning	7. Mastery learning
8. Fear	8. Trust
9. Failure	9. Success
10. Killer phrases	10. Validation phrases

## **What Communities Can Do: Close the Achievement Gap Through School/Family/Community Partnerships**

When responsibility for children's learning is shared by the school, home and community, children have more opportunities for meaningful, engaged learning. Students are able to see the connection between the curriculum in the school and the skills required in the real world.

### **School/Community Alliances**

The problems facing children and families stem from a variety of cultural, economic, political, and health problems. Their solutions require the pooling of resources from public and private sector agencies including:

- Local and state health and human services
- Local businesses
- Religious institutions
- Parent representation from all community ethnic groups
- Community-based social and medical service agencies
- Schools and local education agencies
- Public libraries
- Local universities, colleges, and community colleges
- Community-based service organizations

## **Characteristics of Effective School/Family/Community**

### **Collaborative Partnerships**

Schools are challenged to effectively serve an increasingly diverse student population. The challenge for the entire community is how to provide services efficiently and effectively to ensure success for all students.

- The needs of at-risk students are best addressed by collaborative, prevention oriented programs that serve multiple needs and target the family for intervention.
- Use of case management serves the whole child and reduces fragmentation of service delivery.
- The perspectives of all stakeholders are considered. A needs assessment is a helpful planning tool. Written agreements describing new roles, responsibilities, and procedures guide the operation of the collaborative.
- Issues of child and family confidentiality should be addressed.
- By being sensitive to the needs of individual families, the family is targeted for intervention. Successful programs serve families by meeting the needs of individual

parents. Service areas for consideration include a range of medical, mental health, legal, and social services.

- Location of all services should be a consideration. Locating services together enhances the probability that families will receive the array of services needed. When this is not possible, develop plans for making services available.
- An effective communication is needed to keep all collaborative members informed.
- Collaborative funding and access to ongoing time, space, and professional expertise resources are set aside on an annual basis. Funding should not be subject to year-to-year budgets or limited sources.

### **Conducting a Needs Assessment**

Below are some considerations to keep in mind as you begin planning collaboration between your schools and communities.

- What are local issues or challenges that affect your schools or community at this time?
- What needs to happen to address these issues or challenges?
- How can you use partnerships to better address the issues that affect your schools and community?
- Where do you see your school district, school, program, or community in two to five years?
- Examining your resources, what are some potential partnerships that have not been developed?
- What makes partnerships work?

### **Goals for Community Involvement**

- Schools, families, and community members collaborate by forming an action team to establish a family and community involvement program.
- Schools work with families and the community to define a wide array of ways in which families and community members can be involved in the school.
- Schools work with families and the community to define ways in which medical and human resources can best be utilized to meet the needs of individual children.
- Identify activities that are mutually meaningful and valuable to the school, students, parents, families, and community members.
- Create in-school experiences for family members that are positive, welcoming, and responsive to family needs.
- Emphasize communication between school and home and between school and the community.
- Examine the possibility of redefining schools as community learning centers that offer educational, social, and recreational activities to adults as well as to children.
- Explore ways schools can reach out to community constituencies—senior citizens, clergy, businesses, service clubs, media services—and solicit their support and involvement.

- Provide professional development for school personnel in the areas of communicating with parents and care givers, assessing family needs, and serving as members of planning groups.
- Students benefit from the partnership of school, family, and community through improved achievement, more positive attitudes and behavior, improved self-esteem, and better attendance.

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## Reading: The Minority and At-risk Learner

Learning to read well is an important and necessary lifelong skill for all students. Reading is a complex activity. Students must learn how to both decode print and construct meaning. North Carolina's state assessment in reading focuses on reading comprehension in grades three through eight. Developing reading comprehension may be best served in interactive settings where teachers and students read and talk about the text to each other and write about and discuss what has been read. Students must read a lot, be read to, and talk to other students and the teacher about the text to build independence for personal growth and performance. Both reading and writing are interrelated processes in constructing meaning. Classrooms must maintain an environment where students are allowed to actually read, talk, and write about both fiction and nonfiction texts.

Many minority and at-risk students experience problems with reading. Part of the challenge in teaching students who demonstrate difficulty in reading is convincing them that they can learn to read, in spite to their experience to the contrary (Stahl, 1998). Students' personal belief about their inability to succeed at this task must be minimized as instruction moves forward. Reading skills and strategies must involve explicit teaching--showing students how we think when we read. Oftentimes, students who come to school with less receive less as they are involved in passive reading activities rather than active learning activities. Provide the means for turning the "I can't" attitude into an "I can" attitude. Minority and at-risk students may need more time and practice to develop reading competencies.

As a group, minority and at-risk students tend to score lower on the state's end-of-grade reading tests. Improved reading skills can significantly impact these students' performance.

"Must do" reading tips:

- Activate students' prior knowledge.
- Make connections between prior knowledge (personal experience, general world knowledge, specific topic knowledge) to new information in the text.
- Identify and clarify the purpose for the reading.
- Insist on students giving complete attention to the reading task.
- Make predictions as the reading task begins and proceeds.
- Incorporate a focus on vocabulary development and extension.
- Keep a constant check on understanding.
- Reread and think through confusing parts of the text.
- Stop reading only to repair or clarify understanding.
- Summarize the major points or ideas in the text.
- Use students' existing language as a springboard into Standard English.
- Evaluate understanding of what is read.

*Reading is an active process. Engage mental processes before, during, and after reading!*

## **Strategies to practice frequently and consistently to support at-risk readers include:**

conducting read alouds, questioning, oral retellings, written retellings, picture or graphic retellings, writing-to-learn techniques, and various response to text activities for both fiction and nonfiction texts.

### **Ideas to try**

- Have students listen to rap songs in order to develop a rule base for their creation. Now have the students teach the teacher and classmates the rules for writing their rap. Transfer this concept to the rules that govern the composition of other genres that will be studied.
- Have students listen to a variety of oral and written language styles and discuss the impact of those styles on the message and the likely effect on different audiences. Now recreate the texts or talks using different language styles appropriate for different audiences (i.e., a church group, academicians, rap singers, a feminist group, politicians, PTA, etc.).
- Have students interview various personnel officers in actual workplaces about their attitudes toward divergent styles in oral and written language. Debrief with a discussion of the interview results.
- Have students study and analyze book language. Have them transform the book language into a more familiar or friendly, everyday language that they are more accustomed to.
- Have students or groups of students create a bi-dialectal dictionary of their own language form and Standard English.
- Create a bulletin board with two sides. Display words or phrases from the students' writing. Label one side with "Our Heritage Language" and on the other side place the equivalent form labeled "Formal English."

(Ideas selected from Lisa Delpit's Other People's Children. 1995.)

## Strategies for Supporting At-Risk Students as Writers

- Select meaningful topics. Let students choose their own topics whenever possible.
- Engage students in writing a daily log, expressing their thoughts in complete sentences.
- Clarify the audience and purpose. Make sure students understand these before going further.
- Practice organizational skills in writing by engaging students in writing activities designed to inspire students to want to be successful (i.e., writing a letter to a friend, a famous athlete, a pop star, etc.).
- Don't let students begin writing until they have jotted down notes or ideas and have organized them.
- Teach outlining principles so students understand the difference between main ideas and supporting details.
- Show students how to answer "where," "when," "how," and "what kind of" questions to help them practice expanding ideas.
- Give students patterns or models to follow.
- Read to students lots of paragraphs, stories, etc. that have been written by the teacher, peers, or others who demonstrate good content and organizational skills.
- Start with short writing pieces and build to longer stories/essays.
- Require students to read written work aloud to help them clarify their thoughts and identify errors.
- Provide opportunities for peer evaluation of written work.
- Provide evaluative feedback designed to be instructional.
- Concentrate on one weakness at a time. Correcting all errors may discourage future writing attempts.
- Recognize students' writing (i.e., display work, praise and congratulate students' efforts).

**“LEARNING TO WRITE WELL IS IMPORTANT FOR *ALL* AMERICAN STUDENTS. EVEN THOUGH STUDENTS HAVE VARIED BACKGROUNDS AND EXPERIENCES, THE EXPECTATIONS FOR HIGH PERFORMANCE IN WRITING APPLIES TO ALL.”**

-NORTH CAROLINA ENGLISH LANGUAGE ARTS STANDARD  
COURSE OF STUDY, 1999

Proficiency in writing is one component of the North Carolina Student Accountability Standards. Effective writing [for many minority and at-risk students] takes time, organizational skills, and encouragement.

Many minority and at-risk students need extra time to think, rethink, and revise. To improve their writing, at-risk students need feedback on what they have done well, how to address weaknesses, encouragement, and support.

### **Writing Components that Help Close the Achievement Gap for Minority and At-Risk Students**

All teachers can help minority and at-risk students by incorporating effective writing strategies into content areas. Writing is an important skill across the curriculum. Writing-to-learn techniques used across content areas can provide support for students’ writing proficiency. It helps students who have difficulty with writing learn to think critically about content information. Content-area writing promotes higher-order thinking skills, increases learning, and promotes overall student achievement.

Helpful hints to nurture students’ writing ability:

- Assign **short and clear** daily writing assignments that allow students to connect to prior knowledge and cultural experiences.
- **Build** students’ **confidence** in their own ability to write.
- Assign topics that allow **creativity, play** with language, and **exploration** of cultural dialects or dialogues.
- Provide opportunities for **self-selection** of writing topics.
- Provide **opportunities for brainstorming**.
- Allow daily opportunities to share writing in a **nurturing, positive environment** that accepts and understands cultural differences.
- Create opportunities to **write** for a **real audience** that understands and respects cultural differences.
- Allow enough time to **revise, revise, and revise**.
- Give **positive reinforcement** and **encouragement**.

- **Give daily reinforcement** of effective writing strategies, but focus on one or two strategies at a time. **Don't overwhelm** students.
- Provide opportunities for **collaborative** writing.
- Provide writing opportunities for **individual learning styles**.
- **Provide on-going assessment** of students' writing performance.

## **Using Writing Washboards as a Strategy in All Content Areas**

Writing washboards individualize writing to meet the needs of individual learning styles. Washboards help students launder their ideas and feelings in an atmosphere that is structured, secure, and safe for experimenting with words.

- Explain that washboards are like journals.
- Create a visual image of an old fashioned washboard on which students can literally pound out ideas and clean up their thoughts.
- Ask students to write a brief record of what they learn each day.
- Allow students to write entries any time during the class period.
- Have computers/laptops available for students who have difficulty with handwriting.
- Keep writing washboards in the classroom. Convenient for students to pick them up each day.
- Let students illustrate/individualize the covers.
- Allow students time to write and explore ideas that are meaningful to them.

### **Encourage and show students how to:**

- play with words.
  - brainstorm.
  - make connections to prior experiences in writing.
  - look at visuals for ideas.
  - talk to classmates and compare ideas.
  - draw pictures.
- 
- Allow on-going entries.
  - Allow time for students to share their writings.
  - Create a safe zone in the classroom for oral presentations.
  - Encourage positive peer feedback.
  - Modify washboard assessments based on positive feedback, individual student's cultural perspective, and individual learning styles.

- Encourage and **provide models** for different types of entries:

Free writing  
Word diagrams  
Reflections  
Brainstorming  
Questions  
Summaries  
Dialogue  
Interviews  
Illustrations with writings  
TV/Radio broadcasts  
Commercials  
Cartoons with captions  
Riddles  
Jokes  
Video game formats  
Drama and skits

**\*\*Providing appropriate models for desired student performance is an especially powerful instructional procedure to use in classrooms.**

# Closing the Achievement Gap in Mathematics

## **Equity**

Excellence in math education requires equity. The National Council of Teachers of Mathematics (NCTM) addresses equity in the classroom as one of the six guiding principles of math instruction. Equity implies that all students are expected to understand mathematics and each will be supported in his/her efforts to accomplish this goal.<sup>1</sup>

## **Some Indicators of an Equitable Classroom**

- High expectations
- Non-threatening environment
- Accommodations for differences
- Varied instructional practices
- Consistent support of each student's effort

## **Best Practices in Mathematics**

Evaluations by the U.S. Department of Education, National Science Foundation, American Association for the Advancement of Science, Eisenhower National Consortia, National Diffusion Network, and the Northwest Regional Educational Laboratory have identified several practices that have proven to be promising in the math classroom. These practices involve active engagement in problem-solving activities that are built on knowledge of experiences. The ability to reason is a process that grows out of these experiences. Learning is enhanced by connecting math to the real world through technology and communication of mathematical ideas.<sup>2</sup>

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<sup>1</sup> Principles and Standards for School Mathematics, National Council of Teachers of Mathematics 2000

<sup>2</sup> Promising Practices in Mathematics Education, ERIC, Vol.6 Issue 2

## Bridging the Mathematical Gap Through Best Practices

<b>Tasks</b>	<b>Best Practice</b>
Begin with the concrete and build toward the abstract.	Use of manipulatives Calculators and computers Kinesthetic learning
Build communication skills.	Use of word walls to teach vocabulary Word problems with a variety of structure and solution paths Writing journals Cooperative groups Discussion
Solve routine and non-routine word problems.	Use everyday problems and applications Problem-solving strategies Investigate problem situations Problem-solving projects
Build reasoning skills.	Open-ended problems Questioning Making conjectures Justify thinking Logic puzzles Syllogisms Pattern discernment
Make mathematical connections.	Concept mapping of mathematical ideas Relate real world interests Integrate with other subject matter

<sup>3</sup>

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<sup>3</sup> Best Practices in Teaching Mathematics

## **To Close the Achievement Gap Mathematics Intervention Strategies Should . . .**

- Be used during or before initial instruction to ensure success for at-risk students
- Validate the concrete, kinesthetic learner
- Teach concepts moving from manipulatives, to pictures, to symbols
- Help students transfer “actively learned” concepts to pencil-paper tasks and assessments similar to the end-of-grade/end-of-course tests
- Include vocabulary activities, higher-order thinking, and problem solving strategies
- Teach mathematics concepts from the grade-level North Carolina Standard Course of Study on which students will be tested, scaffolding instruction to fill existing “gaps”
- Be fun, engaging and different than what has already been done!

## **To Make Mathematics Work for Closing the Achievement Gap Teachers Must:**

- Structure lessons so all students become more actively involved
- Feel comfortable in their use of technology
- Provide connections to prior knowledge, other subject areas, careers, and student interests
- Develop an array of teaching strategies so as to address students with different learning styles
- Continue to improve their knowledge of content so they feel comfortable with the curriculum
- Improve their questioning ability by asking higher order questions, allowing for wait time, and encouraging students to give more than one answer
- Become positive about their ability to teach mathematics to all students
- Expect students to want to learn, to do homework, to ask questions, and to seek assistance

## **TEN STEPS FOR SOLVING MATHEMATICS PROBLEMS**

- Whisper read the problem at least two times. Make a mental picture of what you are reading.
- Circle the key words in the question. **MAKE SURE YOU UNDERSTAND WHAT THE QUESTION IS ASKING!**
- Identify and circle/underline the key numbers and labels.
- Eliminate unneeded data by drawing a line through it.
- Thoroughly study any graphs, charts, or diagrams.
- Determine the operation(s)/strategies needed to solve the problem.
- Solve the problem. **SHOW YOUR WORK!** (Draw a picture, draw a number line, look for a pattern, guess and check, make a table or organized list, use logical reasoning, work backwards, make it simpler, etc.)
- Evaluate the answer. **DOES YOUR ANSWER MAKE SENSE? DOES IT ANSWER THE QUESTION(S) ASKED?**
- If an answer sheet is used, check your answer with the answer choices. If your answer is not found, repeat steps one through eight.
- Bubble in the correct answer in the right space on your answer sheet.

## **EFFECTIVE ESL CLASSROOM PRACTICES**

- SHELTERED INSTRUCTION
- COLLABORATIVE GROUP WORK
- COOPERATIVE GROUP WORK
- THEMATIC INSTRUCTION
- ALLOW STUDENTS OPPORTUNITY TO CHOOSE FROM A VARIETY OF SOURCES/RESOURCES
- ALLOW ADDITIONAL TIME FOR STUDENTS TO PROCESS AND COMPLETE TASKS
- PERSONAL JOURNALS
- MULTIPLE OPPORTUNITIES FOR TALK/DISCUSSION
- GRAPHIC ORGANIZERS/MAPS/WEBS
- PROVIDE A PURPOSE FOR LISTENING AND READING

### **Ideas to Promote Cultural Sensitivity**

- Be aware of cultural differences.
- Log progress of LEP students (Latino, Vietnamese, etc.).
- Post school rules in languages that reflect the different populations.
- Observe the social interactions of students of diverse backgrounds.
- Recognize and value the cultural orientations of all students.
- Provide opportunities for students to participate in multicultural activities.

## Twenty Things ESL Parents Must Do to Help Their Children

- Work together with your child to ensure his/her success at school.
- “Sometimes it’s not what you see; it’s what you believe!” Parents have to believe in what your child can do and teach them to believe in themselves as students.
- Be informed of your children’s education. Find ways to participate in your children’s education and ways to exercise your rights and responsibilities as a parent.
- Send your children to school every day.
- Ask your children how their day went at school.
- Know the teacher’s name and your child’s grade level.
- Have the school telephone number in a convenient location at your house.
- Know your child’s bus number.
- Attend parent-teacher conferences on a regular basis.
- Volunteer for school field trips.
- Look for daily assignments.
- Help your child with special projects (do not do it for him/her, but rather facilitate).
- Know some of your child’s classmates. When your child is absent, call for assigned homework.
- Look for Local Task Force agencies that offer translation services if you need assistance with translations.
- Ask your child to review prior assignments with you daily.
- Read daily with your child (use home language, if necessary).
- Ask your child to read aloud to you.
- Make lists of objects and sort at home.
- Ask your child what he/she needs for school.
- Love your child!

## **20 maneras de como los padres pueden ayudar a los niños/a de ESL**

- Trabaje con su niño/a para asegurarle el triunfo en la escuela
- Porque a veces no es lo que vemos, es lo que creemos!!! Usted tiene que creer en lo que su niño/a puede hacer , ensenelo a creer en si mismo como estudiante.
- Este informado sobre la educacion de su niño/a. Busque formas de participar en la educacion de su niño/a y maneras de ejercer sus derechos y responsabilidades como padre.
- Envie a su niño/a todos los dias a la escuela
- Preguntele a su niño/a como le fue durante le dia en la escuela
- Conozca el nombre de la maestra de su niño/a y el grado en el cual esta
- Mantenga el telefono de la escuela en un lugar conveniente en su casa
- Sepa el numero del autobus escolar de su niño/a
- Asista a las conferencias con las maestras frecuentemente
- Paritcipe como voluntario en las excurciones escolares
- Ayude a su niño/a en proyectos especiales( no los haga por ellos, pero faciliteselo)
- Conozca los companeros de clase de su niño/a, cuando su niño/a se ausente de la escuela pida las tareas
- Busque ayuda en las agencias locales que ofrecen servicios de traduccion si usted no habla Ingles
- Siempre revise las tareas diarias con su niño/a
- Lea a diario con su niño/a (use su lenguaje nativo si es necesario)
- Pidale a su niño/a que le lea en voz alta
- Haga listas de objetos en el hogar y clasifiquelas
- Preguntele a su niño/a que necesita
- Ame a su niño/a

## **SURVIVAL TIPS OF ESL CLASSROOM INSTRUCTION**

### NATIVE LANGUAGE TRANSFER AND INTERFERENCE

- If students are literate in a Roman-alphabet language, they will be able to recognize English letters and won't have to learn new symbols. However, they will have different names for the letters and may associate different sounds to perhaps a third of the letters. This will cause interference in oral reading, in matching words to sounds known, and in spelling.
- Newcomers who do not speak English, depending on how close their native language is related to English, experience different levels of difficulty in learning the language. For example, Dutch and English share a large percentage of words, while Hungarian, Chinese, and Vietnamese do not share many words at all. Japanese borrowed words for Western clothing, food, and imported items, but have no cognates in traditional vocabulary areas.
- The English language contains forty-four sounds, but only twenty-six letters to represent those sounds. In addition, there is less than an 85% predictable match symbol to sound. (That is, 15 % of common English words contain an exception to phonic "rules". This makes it difficult to decode and spell English.) In many languages studying spelling and distinguishing homonyms are unknown tasks such as those that have a one-to-one fit between sound and symbol.

### DIFFERENT WRITING SYSTEMS AND ENGLISH

- For speakers of Russian, Greek, Hebrew, Arabic, Korean, Japanese, Hindi, and other languages whose alphabet use symbols different from the Roman alphabet, the learning task must include letter recognition and letter formation. Learning to read English for these students will require more steps and time.
- Students who read in Arabic or Hebrew where the writing system is from right to left will think they are "reading backwards". It will take time to accustom eye muscles to the automaticity needed for left to right reading; word reversals such as TAP for PAT, SAW for WAS can be expected to occur. These students will also need practice to produce legible handwriting.

### SOME PROBLEMS WITH PRE-LITERATE STUDENTS

- Pre-literate students need some time at least some oral competency before they can benefit from reading instruction in English. These students are also limited by not being able to understand instruction in English. If they are at the upper elementary level, there may be a lot of emotional turmoil and frustration over not being able to read and understand English.
- Do not try to teach letter recognition, phonics, and so forth before there are sounds and meanings to correspond with the symbols you want them to interpret.

### NATIVE LANGUAGE READING IS RECOMMENDED FOR PRE-LITERATE STUDENTS

For multiple reasons, it is easier to break into literacy in the student's native language than to learn to read in English by traditional methods. Whenever possible, students should have an opportunity to receive instruction in their native language prior to receiving reading instruction in English. If there is no bilingual personnel at your school, and instruction in the student native language cannot be arranged through school parents, or community, the recommendation is that pre-literate students receive developmental reading instruction either by the reading teacher or the ESL teacher.

### INDIVIDUALIZE INSTRUCTION

- Teach the words SAME and DIFFERENT so you can do exercises that help students distinguish these concepts in shape and sound letters. (Same: 0 0. Different: 0 9. Sounds same: go go. Different: go no.)
- Teach students the alphabet song.
- Teach students to recognize, say, and form the letters in their names.
- Add other letters only as each group of letters is mastered.
- Teach letters individually, and immediately in the context of a known word.
- Use as many modes for learning as possible. Point out letters in the stories you read to them.
- Encourage sight-word recognition: students names, labels, textbooks and subject names, environmental print, names of favorite foods and possessions.

### INDEPENDENT TIME

- Match letters in words.
- Find and circle a certain letter in a short paragraph
- Make alphabet flash cards (upper case and lower case).
- Trace letters.
- Manipulate and sort letter blocks.
- Copy letters and words.
- Make beginning sound “books” with help from a picture dictionary.
- Listen and tape well-illustrated stories.

### FROM DECODING TO MAKING MEANING

- Students may know to decode but not know the meaning of the words read.
- Words with multiple meanings can cause misreading.
- Typical word order in English –subject/verb, or subject /verb/object – is not universal. .For example, in Spanish the subject is often omitted, as it may be understood from the verb ending; in Japanese the word order is (subject) object/verb with the subject, more often than not, omitted. English has prepositions; many Asian languages have post-positions.
- Dependent clauses, participles, passive forms, compound tenses, sequence of tenses, and other formations may present problems because other languages may use different means of expressions that are not parallel to English.
- Idioms are very difficult for ESL students to comprehend. There are 50,000 of them in English.

### REAL REASONS TO WRITE

- Students learn to read and write faster when they have real reasons to communicate: journal writing or letter writing may be in the native language at first. You may not be able to understand it, but you can acknowledge the value and accomplishment of their writing.
- Create situations where they will need to write real invitations, requests, thank-you notes, and letters to pen pals, cards for special occasions, morning news, commercials, and opinions.
- Have them conduct surveys and interviews.
- Make their own book by drawing or cutting out pictures, writing captions and word balloons.

### HELPING ESL STUDENTS IN THE CONTENT AREAS

- ESL students who are newcomers will not be able to perform well in content areas at once.
- ESL students need to experience success to keep fueling their desire to learn.
- Math is the first choice in which newcomers will be responsible. However, if the student is not at grade level in math, this will not work.
- Science can be the second choice. Science can be made very visual and concrete, with hands- on learning opportunities

- Allow success in one area before inviting students to try on other areas.

### MATHEMATICS

- To learn the basic sounds of the English words for numbers and operations, have students work independently with tapes or with a partner.
- Students from South America and many European countries need to learn that in America a comma is written in large numbers where they write a period, and that where they use a decimal mark a comma is used, and our decimal mark is a period. That is, our number 4.324 is interpreted by them as 4,324 and vice versa.
- Math word problems offer more difficulty, but since each word problem can be illustrated through a number operation and often through pictures, a buddy or partner can illustrate them.
- Students may also use their bilingual dictionary.
- Shorten assigned word problems.
- Teach key words that indicate different operations.
- Most of the world use the metric system, ask the students to measure different items in the classroom.
- Have ESL students become familiar with Fahrenheit temperature readings by keeping a chart of outdoor and indoor temperature.
- Teach students USA currency, money, and time are not universal.
- Have numbers and math words be the first spelling responsibility.
- There are cultural differences in math.
- The order in which math skills are taught vary from country to country.
- Computational skills such as multiplication and long division are taught earlier in some countries.
- Geometry concepts, such as parallel lines, perimeter, and area are taught much later.
- The mechanics of performing operations may be different in the cultures of some students.
- Students from South America and Caribbean may display their work for division problems in a different manner from the U.S. manner.

Example: 4,756 divided by 41

In U.S.: The problem is solved using long division.

In Caribbean countries: The problem is solved using mental arithmetic.

### MENTAL ARITHMETIC

- Some ESL students learn to do arithmetic computations mentally and do not need to show their work.
- Some ESL students may appear to be counting on their fingers to add and subtract large numbers. They may be, in fact, using their fingers as an abacus.

### SCIENCE

- There are some science terms that are cognates with terms in other languages. Words like “pollution, electricity, animal, plant, mammal, vertebrate, cell, microscope, system, skeleton, vision”, and many others are easily recognized cognates of words in Spanish and other Latin-based language.
- Use hands-on and visual enhancements to engage all of your students’ interest in science.
- For demonstration lessons, teach the names of the materials and equipment you are using. Give a running narration while presenting.
- For newcomers you may first assign the students to copy or draw diagrams, charts, and graphs; making dioramas, and models; helping you with demonstrations.
- Have students work on projects in-groups.
- Use the language experience approach.
- Create oral experiences for all your students to talk about.

### SOCIAL STUDIES

- ESL students may know as little about the United States as our elementary students know about the history, geography, and national heroes of their country.
- Ask the media specialist for a list of “well illustrated” books on a beginning –to read level covering heroes, holidays, and the history that “everybody knows”.
- These books should contain only on or two lines of text per page. The students should keep a record of the books they read, and write brief reports on them.
- Have ESL students check these books out (or check them out for them) for use in the classroom.
- Mainstream students can read some of the books to the ESL student or tape them. Or the ESL student can read on his or her own, with help of a dictionary and the pictures.
- Provide books that will teach through pictures.
- Use filmstrips, or filmstrips with cassettes. Have the ESL learner learn with visuals.
- Some publishers specialize in high-concept-level, low-reading-level texts in the content areas. See if you can get the media center to order some of these.
- If there are many students of a particular language in your school, check with the ESL teacher, and media specialist for the availability of elementary school-level social studies texts in that language, and the possibility of acquiring some.
- Many materials exist in Spanish, and a growing number in Asian languages.
- Use your standard text, but assign much shorter sections to the ESL student, to make it manageable.

### MODIFYING ASSIGNMENTS

- Have ESL students look at the visuals in the chapter, rather than the text.
- Have students write in their native language if they cannot write it in English.
- Allow ESL students to write about what they understand or see in pictures.
- ESL students need to be able to use their bilingual dictionaries to write the English words for things they see in pictures.
- Have them copy the captions under the pictures and the chapter subtitles.
- Write a list of key words for the student to find in their bilingual dictionaries.
- Have students copy a chart, make a graph, or draw a picture, time line, table, or diagram
- Have students trace a map, then label cities, states, rivers, and mountains.
- Have a buddy talk to the ESL students about the pictures in the chapters, pointing out to key vocabulary, and reading the captions aloud to them.
- Have mainstream students tape part of a chapter so the student can read along and hear the sound of the language.

### MEANINGFUL WAYS FOR ESL STUDENTS TO LEARN NEW WORDS

- List the words needed.
- Alphabetize them.
- Find the words in a bilingual dictionary and write the definition.
- If any of the words can be illustrated, draw pictures of them.
- Learn the correct pronunciation of the word.
- Write a synonym in English.
- Listen to a buddy use the word in additional sentences to illustrate the meaning.
- Say and write the sentences to demonstrate knowledge of the word.
- Make a word-find puzzle that has the words in it.

### COMMON QUESTIONS TEACHERS ASK ABOUT ESL STUDENTS

- If I do not speak the student language, what should I do in an emergency?  
Find a translator or a student who is a native speaker.
- Should I correct student’s errors?  
No. Model the correct use of the language.
- When will the ESL student learn English? How soon?

This depends on the student's level of language proficiency. It could take from 1 – to –7 school years (first two years for social language development and three to seven years for academic language development).

- Why can't ESL students speak as well as they write, or vice versa?  
Oral language skills develop first as is usually the case in any other language.
- Why do ESL students stay quiet in the classroom? I know they understand.  
ESL students may remain quiet for a variety of reasons: (1) They may not really understand the language; (2) Fear of embarrassment; or (3) disconnectedness or lack of motivation.
- How do I correct students when they pick up bad language on the playground?  
Follow the same procedure you would use with any other child.
- Is there any computer program for ESL students?  
Yes. Contact your media specialist/coordinator and/or your technology coordinator.
- Can I test an ESL student for disabilities if they do not speak English?  
Yes, you can. Contact the bilingual specialist in your school or district for assistance or more information.
- How do you distinguish a learning disability from a language limitation?  
You may wish to contact the ESL teacher or ESL coordinator for assistance and/or more information.
- What if there is jealousy, ethnic, or racial animosity between newcomers and the existing school population?  
Promote diversity and tolerance among students by acknowledging everyone's contribution to society.
- Can we retain a child or assign a child to special education classes if they do not speak English?  
No. This cannot be the only reason to retain or assign a child to special education classes.
- Why don't most ESL parents come to school when I send conference letters to their homes.  
There are several reasons: (1) they might not speak the language; (2) fear of deportation; and (3) responsibilities with multiple jobs.

These suggestions are taken from CLASSROOM TEACHER'S ESL SURVIVAL, Elizabeth Claire and Judy Haynes, 1994 (Prentice Hall Regents).