Check Your Understanding

2.1. What has been the government's response to language diversity in our nation's schools?

2.2. Bilingual education and other approaches that primarily focus on teaching English differ radically in both philosophies and practices. What are the primary differences in these two major approaches schools use in working with English language learners?

2.3. What are the major ways that teachers can adapt their instruction to meet the needs of students with varying language backgrounds?

For feedback, go to the appendix, *Check Your Understanding*, located in the back of this text.

Gender

What Geri Peterson sees on her first day of teaching Advanced Placement calculus is both surprising and disturbing: Of the 26 students watching her, only 4 are girls, and they sit quietly in class, responding only when she asks them direct questions. One reason that Geri has gone into teaching is to share her interest in math with other females, but this situation gives her little chance to do so.

Teaching and You

Think about this class. What is the ratio of males to females? Is it similar to other classes you're taking? How would the ratio be different if it were an engineering or computer science class?

Lori Anderson, the school counselor at an urban middle school, looks up from the desk where she is working on her annual report to the faculty. From her course work at the university and her internship, she knows that boys traditionally outnumber girls with respect to behavioral problems, but the numbers she sees are disturbing. In every category—referrals by teachers, absenteeism, tardies, and fights—boys outnumber girls by more than 2 to 1. In addition, the number of boys referred to her for special education testing far exceeds referrals for girls.

Gender and Society

Why did you choose your current major? Did your gender play a role in the decision? If you are like students in other areas, there's a chance it did. For example, 85% of teachers are female, but instructors of computer science courses at the university level report just the opposite; the vast majority of their students are male (Feistritzer, 2011).

The fact that males and females are different is so obvious that we often don't think about it, but research has uncovered some important gender-related differences. For example, females generally are more extroverted, anxious, and trusting; they're less assertive and have slightly lower self-esteem than males of the same age and background; and their verbal and motor skills tend to develop faster than boys' (Berk, 2012). In addition, the play habits of boys and girls differ, with boys typically preferring more "rough and tumble" play. These gender differences will also influence learning and teaching in your classroom.

Why do these differences exist? As with most other individual differences, research suggests the influence of both genetics and environment (Berk, 2012). Genetics largely determines physical differences such as size and growth rate and may also influence temperament, aggressiveness, and early verbal and exploratory behaviors. And some researchers now believe that boys' and girls' brains are wired differently for learning. For example, components of the brain that focus on words and fine-motor skills are developmentally a year ahead in girls, which gives them an advantage in reading, small-motor tasks, such as using

pencils and scissors, and printing and cursive writing. Emotional centers in the brain are also more advanced for girls, making them calmer and more able to sit still for the long periods that classrooms often require (Eliot, 2010). Some wonder if schools, as they currently exist, may be more compatible with girls' genetic makeup (Gurian & Stevens, 2007).

Our environment also influences gender differences. From the day we're born, boys and girls are treated differently (Berk, 2012). Girls are given pink blankets, are called cute and pretty, and are handled delicately. Boys are dressed in blue, are regarded as handsome, and are seen as tougher, better coordinated, and hardier. Fathers are rougher with their sons and involve them in more physical stimulation and play; they tend to be gentler with their daughters and offer more gender-stereotyped toys, such as dolls and stuffed animals. Not surprisingly, boys and girls grow up looking and acting differently.

Gender and Classrooms

Differences between boys and girls should generally be celebrated, but **gender bias** becomes a problem when forces in schools and the larger society limit the growth and academic potential of either boys or girls, as happened in Geri Peterson's AP calculus class. In high school, girls score lower than boys on the math sections of the SAT and the ACT, two tests that are essential for college admission, and women score lower on all sections of the Graduate Record Exam, the Medical College Admissions Test, and admissions tests for law, dental, and optometry schools (Alperstein, 2005; Halpern, Benbow, Geary, Gur, Hyde, & Gemsbacher, 2007; O'Shea, Heilbronner, & Reis, 2010). These tests are important because they serve as gatekeepers to high-paying professions.

But as you saw in Lori Anderson's school, boys have their own problems (Berk, 2012; Wallace, Goodkind, Wallace, & Bachman, 2008). They're retained or held back in grade more often, they're more than twice as likely to be placed in **special education** classes, and they far outnumber girls in remedial English and math classes. Boys receive both lower grades and the majority of failing grades, and they are more likely to drop out of school. They are also cited for disciplinary infractions much more often than girls.

So, we have an uneven picture of male and female strengths and weaknesses, but historically, concerns about girls received the most attention. For instance, in *How Schools Shortchange Girls*, the American Association of University Women (AAUW, 1992) argued that differential treatment of boys and girls by both teachers and society seriously hampered the educational progress, self-esteem, and career choices of girls. In the 1998 *Gender Gaps: Where Schools Still Fail Our Children*, the AAUW reiterated many of its earlier claims.

These assertions are controversial and have been countered by others. For example, popular books such as *The Problem with Boys' Education* (Martino, Kehler & Weaver-Hightower, 2009) and *Guyland: The Perilous World Where Boys Become Men* (Kimmel, 2008) assert that males are being shortchanged by our educational system. Yet it's the myth of the fragile girl that continues to receive the lion's share of attention, these authors argue.

Boys' educational problems extend into college. Women are more likely to attend college, earn a degree (57% to 43%), get higher grades, and earn a master's degree (59% to 41%). And women earn the majority of research PhDs awarded to U.S. citizens (Sommers, 2008).

As with gender differences in general, a combination of genetics and the environment probably explains the relative strengths and weaknesses of boys and girls in school. Because little can be done about genetics, more attention has been given to the environment, particularly the part gender-role identity differences play in shaping student behaviors. **Gender-role identity** describes societal differences in expectations and beliefs about appropriate roles and behaviors

of the two sexes. Society treats boys and girls differently and expects them to develop different gender-role identities. These identity differences aren't a problem unless they perpetuate stereotypes or negatively influence behavior, learning, or expectations for school success. A **stereotype** is a rigid, simplistic caricature of a particular group of people. For example, "Women aren't good at math" and "Men don't make good nurses or teachers" are both inaccurate and damaging stereotypes because they limit career choices.

Revisiting My Beliefs

This section addresses the third item in *This I Believe*, "Boys generally get better grades in school than girls." This statement is not true, and in fact, the opposite is the case: Girls generally do better than boys on a number of academic measures, with grades being one of the most obvious.

Gender and Career Choices

Look around your classroom for this course; if it's a typical education course, the vast majority of the students are women. The same would be true for classes in nursing, but you would find the opposite in math, science, engineering, and computer-related fields (Cavanagh, 2008).

Where do stereotypes of "appropriate" careers for boys and girls originate? Some are perpetuated by society, but ironically, parents—and particularly mothers—also play a major role. For example, when mothers believe that math is a male domain—a negative gender-stereotyped view—their daughters take fewer math classes, get lower grades in them, and are less likely to view math positively (Cavanagh, 2008).

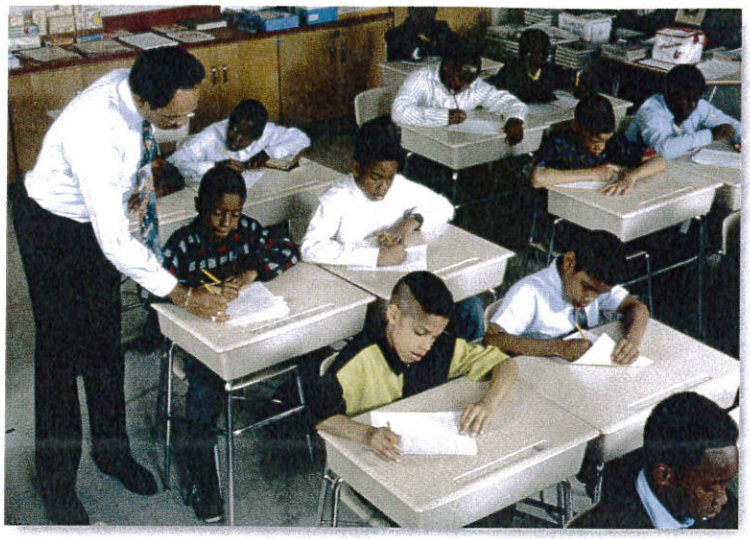
Gender-stereotypic views can also negatively influence career decisions (Hill, Corbett, & Rose, 2010). For example, only 20% of the bachelor's degrees in engineering and physical and computer sciences go to women. At the high school level, only 19% of students taking the College Board Advanced Placement test in Computer Science in 2009 were women, only slightly higher than the percentage of undergraduate female majors (19%) (Hafner, 2012; National Center for Women and Information Technology, 2010). While slightly more than 50% of all doctorates are earned by women, the percentage in science-related fields remains low—33% in physics and earth science, 27% in math and computer science, and 22% in engineering (Jaschik, 2010). Many of the gender-stereotypic views of math, science, and computer science careers begin in middle and high school, where too many females avoid taking challenging advanced math and science courses; this problem is especially acute for minority females (Riegle-Crumb & King, 2010).

Nontraditional role models can help prevent students from forming gender-stereotypic views about appropriate careers.

Similar gender-related problems exist for men. Go to any elementary school, and you'll see that the faculty is overwhelmingly female. This is especially true at the kindergarten and preschool levels, where 97% of the teachers are female (MenTeach, 2010). And although more men are choosing nursing as a career, they remain a distinct minority (just 7% of registered nurses) (Vigeland, 2012).

Single-Sex Classrooms and Schools

What would you say to a class of fifth graders who weren't working hard enough? Here is how one urban teacher responded, "You—let me see you trying! Come on, faster!" Another, right across the hall, said this, "This is so sloppy, honey. Remember what I spoke to you about? About being the bright shining star that



Single-sex classrooms attempt to build on students' strengths and remove the distractions from the other sex.

you are?" (Medina, 2009b, p. A24). Can you guess which teacher was talking to an all-girls class and which was addressing a room full of boys?

The creation of **single-sex classes and schools**, where boys and girls are segregated for part or all of the day, is one response to gender-related learning problems. One argument for single-sex classrooms is that they minimize distractions from the other sex that interfere with learning. One director of a single-sex school notes, "The boys don't feel like they need to put on a big show for the girls, and the girls feel like they can strive academically without having to dumb down their ability" (Standen, 2007, p. 47). Separating boys and girls also allows teachers to adjust their teaching to the specific needs and interests of each.

The number of single-sex classrooms in the United States has increased dramatically, from less than a dozen in 2000 to 510 in 2011. In addition, there are now 95 completely single-sex schools in the United States (Medina, 2009b; Zubrzycki, 2012).

Why this interest in single-sex classrooms and schools? Advocates claim that both girls and boys benefit from single-sex schools (Sullivan, Joshi, & Leonard, 2010). Girls in these schools are more likely to assume leadership roles, take more math and science courses, and have higher self-esteem. Advocates of all-male schools claim that they promote male character development and are especially effective with boys from low-income and minority families (Patterson, 2012).

However, a more recent study on single-sex schooling disputes these claims and even calls for a ban on the practice (Halpern et al., 2011). These critics assert that academic achievement is no higher in single-sex classrooms, gender stereotypes are reinforced, boys become more aggressive, and girls' assertiveness is reduced.

Research raises other issues. Because boys and girls are isolated from one another, single-sex schools and classes might not prepare students for the "real world," where males and females must work together (Standen, 2007). One critic observed, "a boy who has never been beaten by a girl on an algebra test could have some major problems having a female supervisor" (Medina, 2009b, p. A24). Some critics also question the legality of single-sex schools and classrooms based on Title IX, the federal law that prohibits discrimination on the basis of sex, but recent federal directives suggest that these are legal if participation is voluntary and comparable educational opportunities are available to both sexes (Schimmel, Stellman, et al., 2011). More research is needed to determine the long-term effects of this experiment and whether these changes are effective for helping students learn and develop. At this point, the research is inconclusive (Zubrzycki, 2012).

Interestingly, single-sex classrooms, or at least segregation of the sexes, were common in colonial schools in the United States. On the other hand, England, with a long history of private, single-sex schools, is currently moving away from them and toward coeducational classrooms (Younger & Warrington, 2006).

Gender and Classrooms: Implications for Teachers

What can you do to promote gender equality in your classroom? The following suggestions offer guidance:

- Communicate openly with students about gender issues and concerns. Simply telling your students that teachers often treat boys and girls differently and that you're going to work to treat them equally is a positive first step.