Gender-Biased Learning

It's a girl! The most influential statement about one's development as a human being is announced at birth. Whether male or female, one's gender marks one's entire life from within and without.

"Few elements of our identities come as close to our sense of who we are as gender," says linguist Deborah Tannen in her book, *Talking 9 to 5*. "Perhaps it is because our sense of gender is so deeply rooted that people are inclined to hear descriptions of gender patterns as statements about gender identity—in other words, as absolute differences rather than a matter of degree and percentage, and as universal rather than culturally mediated."

How our gender shapes the way we learn, from cradle to grave, has been studied from two main perspectives. One includes the examination of sex differences in biology and the cognitive-processing approach used in current brain research. The other perspective is one taken by sociologists, psychologists, educators, and feminists. Many of them feel that although biology and hormones play a definite part in one's sense of gender identity, it is the way we are programmed culturally that matters most.

Does the way we learn
(and are taught)
come in pink and blue?

By Ruth Palombo Weiss

Because proponents of those two approaches don't always agree, it's important to remember when we look at both bodies of literatures to be cautious of making generalizations.

Many neuroscientists tend to look at gender as hardwired from earliest embryonic development. From *Sex on the Brain* by science writer Deborah Blum: "The question is, do our genes have a program in mind for each sex? Do they produce a distinct male chemistry that leaps to the fight and a distinct female [chemistry] that turns toward comfort and caution?"

Blum also writes: "If hormones do profoundly affect behavior—which I believe they do, though not all [behavior]—then they must do so as one of many cast members, not as a solo performer. Our behaviors are, in many ways, wide open to many influences: foods, drugs, injuries, and life in all of its dimensions. We can also choose to override an instinct. Think of biology and behavior as dancers: One leads, the other follows. But which does which and when?"

Blum further points out that current research in the field of biology shows complex interconnections between how genes preset our biological programs and how, in turn, our life experiences can affect genetic predisposition.

Most researchers agree that whether we have predominantly male or female hormones affecting the way our brains are formed and maintained, there are more similarities than differences between men and women.

"When women excel at 'male' activities, they are suspected of harboring some secret maleness. When men excel at 'female' activities, their maleness is suspect," writes Phyllis Burke in her book, *Gender Shock: Exploding the Myths of Male and Female*.

"The general reproductive differences in the bodies of girls and boys have not been shown to cause 'masculine' and 'feminine' behaviors, although the behaviors that girls and boys are encouraged to perform can make parts of their brains more responsive or cause their motor skills, both fine and gross, to develop along different paths."

The silent majority

Not surprisingly, boys and girls (and later, men and women) are clearly influenced in the ways they learn—by their brain chemistry and by society. Educators David and Myra Sadker have studied how children are taught and the tremendous influence teachers have in directing the learning process.

"Sitting in the same classroom, reading the same textbook, listening to the same teacher, boys and girls receive very different educations. From grade school through graduate school, female students are more likely to be invisible members of classrooms," they write in their book, *Failing at Fairness: How American Schools Cheat Girls*.

Their research shows that teachers interact with males more frequently, ask them better questions, and give them more precise and helpful feedback. Girls (and subsequently, women) suffer the cumulative effect of their teachers' uneven distribution of energy, talent, and attention.

Such discrimination is often not overt. For example, typically, boys demand more attention in the classroom. Whether the boys' comments are irrelevant or insightful, teachers still respond to them far more often than they do to the girls' comments. In other words, the squeaky wheel gets oiled. However, the Sadkers found that "when girls call out, there is a fascinating occurrence: Suddenly the teacher remembers the rule about raising your hand before you talk. And then the girl, who is usually not as assertive as the male students, is deftly and swiftly put back in her place."

The question for adult trainers is whether gender bias continues in adult learning situations. In their book *Women as Learners*, Elisabeth Hayes and Daniele D. Flannery note that women's learning either isn't addressed in most of the literature on adult education or it's treated superficially. But they also make it clear that more women than ever are participating in a wide variety of learning situations.

"Nevertheless, the typical scenario is either that little is actually done to meet [the] needs [of women learners] or that efforts to do so are based on outdated information and perspectives," they write.

Dominant learning theories in adult education often don't pay sufficient attention to the great diversity among learners, including differences between women and men. In fact, prevailing theories of learning and teaching show evidence of distinct biases towards certain values and cultural norms, which are often inconsistent with the experiences of women and many men.

"For example, it is common to find women described simplistically as 'collaborative' learners, a characterization that seems to reinforce dominant stereotypes about women's orientation toward others rather than providing nuanced insight [on] diversity among women and the particular kinds of relationships that might be beneficial," write Hayes and Flannery.

Janice Koch, an educator at Hofstra University, reinforces that idea when she comments that the idea of self-directed learners as the sine qua non of adult learning is tinged with cultural specificity. Being self-directed and individualistic isn't universally desirable from culture to culture. Rather it's typical in the American culture, which lauds competitive individual achievement to obtain higher status.

"Girls and young women who exhibit fierce independence of thought and action are often considered strident and unfeminine," says Koch.

Hayes suggests that trainers explore the idea of gender as a cultural construct. She says that men and women have different experiences and that those experiences shape our knowledge and learning styles. For example, a woman might become familiar with day care centers; a man might become familiar with hardware stores.

Cultural influences in gender differences, however, aren't complete or tidy. True, women may have more opportunities to engage in conversation with other women about mothering and men may have more opportunities to talk with other men about cars. But when it's a woman's responsibility to take care of car maintenance, she develops a different knowledge base. The same is true when a man has the primary parenting role. It's not that women are better at parenting or that men are better with cars, but society's gender norms tend to impart to women and men more experience in a particular field.

Koch also notes the discrepancy between what's considered "natural" and what gets played out in real life. She points out that girls are supposed to

faint at the sight of blood—"Yet, they menstruate from about age 13." Another general perception is that women can't get messy. Koch reminds, "Women change diapers and clean out chickens and toilet bowls."

Subtle biases

Although women constitute the majority of students in higher education, there continues to be considerable variation in women's participation in different areas of study, according to Hayes and Flannery. They write:

"From 1992 to 1993, women received 59 percent of doctoral degrees, but only 11 percent in engineering and only 25 percent in math. Forty-five percent of medical students are women, but many more women study pediatrics than surgery. Such choices are affected by a complex range of factors, which include persistent social norms and beliefs regarding women's abilities—such as that women are good with children or less able to handle stress.

The task for any trainer is to try to make conscious the unconscious biases. But examples of discrimination persist in adult education—such as calling directly on men students but not on women, responding more fully to men's comments than to women's, and interrupting women students more often.

Despite the growing awareness of subtle forms of gender bias, textbooks, instructional materials, and lectures aren't just sources of knowledge about subject matter; they're also influential sources of learning about gender. Even with widespread awareness of and attempts to redress gender biases, they continue—if only in more subtle forms.

Biases in teaching adults (not only in terms of gender but also in terms of race and class) are still prevalent. An instructor can present such biases in text, oral examples, and anecdotes. An example would be when a trainer exclusively uses examples with males as models. Another example would be when a trainer depicts women in traditional business roles such as a secretary or administrative assistant.

Elizabeth Tisdell, a contributor to *Women as Learners,* gives the example of showing a group of educators a series of instructional videos in which women are underrepresented visually and in speaking roles. Interestingly, several educators in the audience were unaware of the video's biases at first—a finding that may indicate how difficult it is to identify and change a biased curriculum.

Tisdell also points out that men are often more affirmed in classrooms than women are. Although men don't necessarily dominate a classroom in terms of talking time, they're often perceived as having more power and knowledge. When men talk, people tend to pay more attention. That may be because men characteristically make statements rather than ask questions. Women also make statements, but they tend to apply tag questions such as "Do you think…?" or "Wouldn't you say that…?" to keep a discussion going.

Researchers have found that the relative number of female students in a given class and the number of female instructors can greatly influence the way in which women respond in adult learning situations. Several studies suggest that female and male students talk more in classrooms led by female instructors and that male-female participation tends to be more equal in those classes, according to Hayes and Flannery.

A possible explanation for women talking more frequently in classes lead by female instructors is that a female teacher provides a positive role model for women, thereby increasing the likelihood that female students will feel comfortable contributing to the discussion. Men may also talk more in such situations because the status difference between a female teacher and students is perceived as less. Another explanation may be that the sex of the teacher isn't the critical factor, but that female teachers are more likely to use techniques, such as group discussion, that encourage student participation.

Koch notes that trainers can't singlehandedly make the playing field more gender neutral, but they can invite trainees to participate in strategies and scenarios that might demonstrate that most of us are part of what needs to change. She says, "Gender-specific behavior can be mediated and explored critically, allowing for a wide range of behaviors to be developed and expressed."

Tisdell says that trainers can draw on women, along with people of color, to be cast in leadership roles. She notes that although a trainer may not be able to influence the curriculum, he or she can influence how it is taught.

"There is a lot you can do in terms of pedagogy, which is the process by which a course is handled. For example, a lot of women really value connected ways of teaching and learning. So if one is teaching a computer class, it will be much more appealing if it can be done in a way that helps connect people with each other," says Tisdell.

The Sadkers say, "Gender gives us a unique lens on effective training. It's a way of looking at what we're doing. If you're fair with gender, you get more effective teaching skills into the classroom. The nicest people sometimes don't behave in the nicest way because they don't think, because they're not aware. We've found that equity skills and effectiveness skills build on each other."

Hayes says that the easiest thing for instructors to do is point out that biases exist. "Part of me wants to say that a classroom can never be gender neutral. The ideal isn't to strive or claim it can be gender neutral. Rather, we want to achieve equitable classrooms. We want to teach people to learn in different sorts of ways. A lot of it involves understanding students and engaging them in their own exploration of their issues."

In talking about society's implied expectations that men are doctors and women are teachers or secretaries, Tannen concludes that "there's no point in blaming those who expect the world to continue as it has been in the past. But we shouldn't let anyone off the hook either, including ourselves. We must continually remind ourselves that the world is changing and [that] women and men no longer can be depended upon to stay in the narrowly prescribed roles [they have been] consigned to in the past."

It seems obvious that when the gender-bias patterns are changed, no matter how long it takes, women and men will be better able to reach their full potential as equally contributing members of society. ❑

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