

## The Single Sex Math Classroom

For the final three quarters of the 2007-2008 school year, ninth and tenth grade students in an integrated math class at Lincoln School, Kathmandu, have been split into two sections based on gender. A group of teachers at the school have been engaged in research and professional discussion on the topic of brain- and gender-based learning, and I decided it was time to put our research into practice. Along with a teaching assistant in the math department, Rajeeva Kumar, I proposed to the principal that our class of 24 students be split into two sections based on gender and that the assistant and I share teaching responsibilities for the two groups. Parents were surprisingly supportive of the proposal, while students were far more mixed in their responses. Information on gender differences and developmental stages was shared with all groups, and parents were referred to some of the literature put out by the Gurian Institute ([www.gurianinstitute.com](http://www.gurianinstitute.com)) based in Colorado.

As the school year comes to a close, we are reflecting on some of the successes and difficulties we've experienced with the split. It has become clear to me that one of the most important indicators of success is knowledge of gender differences and the reasons for adapting instructional strategies when dealing with boys or girls. The teaching assistant had not initially been a part of research related to this topic, and he found himself asking lots of questions and quickly reading up on literature on single-sex schooling. We were both adjusting structures and strategies as we learned more and saw our students respond to changes. We found that we needed to spend far more time planning and debriefing than we had previously both because we were co-teaching the group and because we were dealing with different issues with the boys' class than we were with the girls'. Certainly, our work could have been less complicated if we had each worked exclusively with one or the other group, and we probably could have more efficiently implemented strategies if we focused on one gender's learning needs. However, as educators we felt that we learned a great deal through observing both groups and collaborating in our efforts.

While I am hesitant to make any general statements about boys' and girls' classrooms based on this brief "experiment", I have enjoyed sharing our observations with colleagues and parents. In comparing our earlier co-ed classes with the gender-based classes, we found that the boys were more efficient and more willing to share than they had been previously and that they became more expressive in asking for help and celebrating their learning. In the girls' classroom, on the other hand, differences were less pronounced. In fact, far fewer girls reported changes in their learning than did boys. Social differences between boys and girls at this age became more pronounced. Although girls are typically observed to be more verbal than boys, the observations in this classroom indicated that they were less willing to talk and share with every individual in the group. The girls did tend to prefer larger working groups when completing assignments and sharing ideas, but they regularly sought to form those groups around their own social groups and needed teacher support in moving beyond those groups. Next door in the boys' classroom, students moved around between work (and social) groups far more easily, but when it came time to focus and complete a task, they generally chose to work alone or with one

partner, only turning to the larger group at the end to check an answer or to look for approval.

There is a growing body of research on single-sex schooling, and a growing number of public schools in the US are considering single-sex classrooms or entire single gender schools. Even we educators who are working in co-ed classrooms are finding that the research is very much applicable in a mixed gender setting. As our own mini-research at our school has shown, even small changes in activity and structure can benefit all students while significantly improving the performance levels of boys or girls. Our professional group has decided that our next goal is to get the information that we have out to students, parents and fellow teachers in our community, and we want to encourage professional development for all teachers in gender- and brain-based learning so that we can better understand how best to meet the needs of all students.

By Liz Shrestha, Math Teacher