

THE CHALKBOARD

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A Special Issue on Diversity in Education

Features in this Issue Written by:

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Greetings from the Dean

Deborah Shanley

Dean, School of Education

As we approach 2004, we face ongoing global environmental challenges, shifting demographic trends, unsettling instability due to terrorism, as well as exciting technological breakthroughs. All of these complexities, and the intangible human, moral and social dimensions of our world and work, provide the opportunity for us to share with each other experiences that cross borders.

In this issue of Chalkboard, three faculty members share their summer activities in other geographic spaces and call our attention to discovered similarities and differences. In their role as faculty developing educators for this new world, they are gaining a deeper understanding of diverse cultures and different societies in which we all live. These experiences enrich their teaching and scholarship and shape classroom interactions between teacher and students in interesting ways.

We are all proud of the many accomplishments of our faculty and warmly welcome our new members and the riches they bring from their varied backgrounds. Please take a moment to read our good news and celebrate all the work that is being done in partnership with our local schools and communities—both locally and globally.

Best wishes for a peaceful holiday season and New Year!

Teaching in a Multicultural Classroom

[Alma Rubal-Lopez](#), associate professor, undergraduate deputy;
program coordinator, bilingual education

Editor's note: The following summarizes an interview by the editor with Prof. Rubal-Lopez

This summer marked my third year as an invited participant in the annual summer institute at the University of Puerto Rico College of Education, held in collaboration with the Brooklyn College School of Education. My classes covered the subject of multicultural education and how to incorporate it into the curriculum so that it can be replicated in a New York City classroom. This year's theme, "Science in the Multicultural Classroom," gave me the opportunity to explore with my students the many uses of the multicultural approach in teaching and learning, a subject in which ethnicity and culture are not generally considered necessary elements.

Multicultural education is a concept that emerged from, and is fueled by, the great changes that have occurred in American culture over the past forty years. Questions arose about equity and the nature of education and of the body of knowledge it was intended to convey: What exactly was that knowledge, where did it come from, and why was it important? The school canon, previously unquestioned, came up for examination. Whole classes of people—who were marginally depicted if they were depicted at all in textbooks—became curious about their cultures and their roles historical roles. There was a move to remedy their exclusion from the general view of what was essential in education in order to make room in the body of knowledge for all cultures, rather than only the dominant, European-derived standard against which all other people were judged, and to acknowledge the richness of all cultures' contributions to knowledge as a whole.

With its focus on broadening the very definition on knowledge, multicultural education readdresses traditional assumptions about schools as the purveyors of culture in our society. According to Nieto, whose has written extensively on the issue, multicultural education rests on this conceptual framework:

- "It is a process of comprehensive school reform and basic education for all students.
- Challenges and rejects racism and other forms of discrimination in schools and society, and accepts and affirms the pluralism (ethnic, racial, linguistic, religious, economic, and gender, and others) that students, their communities and teachers represent.
- It permeates the curriculum and instructional strategies used in schools, as well as the interactions among teachers, students and parents, and the very way that schools conceptualize the nature of teaching and learning.
- It uses critical pedagogy as its underlying philosophy and focuses on knowledge, reflection, and action as the basis for social change; multicultural education promotes the democratic principles of social justice."

The importance of the multicultural approach is that it opens up a broader area of knowledge about the cultures of those who are being taught, allowing them to understand and respect the contributions their own traditions have made to our country; it opposes the insularity and limitations of the generic American culture.

The critical pedagogy as elaborated by Nieto is expressed as one of the four commitments in the School of Education's Conceptual Framework (see <http://depthome.brooklyn.cuny.edu/schooled/Conframe.htm>). Rather than offering a simple transfer of knowledge, critical pedagogy involves the rethinking of what we teach and how we teach it. Knowledge is never neutral or apolitical; thus critical pedagogy seeks to uncover the underlying worldview implicit in what is being presented as knowledge. Students must acknowledge the inconsistencies they discover and learn to examine all perspectives presented.

In such an educational setting, no student's culture or linguistic background is deemed unworthy. On the contrary, all cultures are viewed as providing a vital contribution to the general pool of knowledge. Students are encouraged to draw from their own experience as a means to share and absorb what is being taught in the classroom. Science education, for example, would examine the natural environment of a student's country of origin, using the artifacts of one's culture as subjects of scientific inquiry, or focusing on the contributions made by scientists in one's birthplace.

The challenge of the multicultural approach to teacher preparation is to develop diverse methods by which culture and ethnicity are vital components of the classroom experience. As mentioned, use of cultural references as tools for helping students understand scientific concepts makes the knowledge more palpable and more likely to be retained. In areas of study outside of science and mathematics, the teaching of critical reflection is a major pathway to gaining, and contributing to, the body of knowledge that our diverse culture comprises.

The multicultural perspective in education brings with it many rewards, both to members of under-represented groups and to those of the mainstream society. It demythologizes some of the "truths" that we have been taught to take for granted, and provides an influx of new ideas that enrich the culture and enables people to more fully understand the realities of today's world. As multicultural education opens the canon to include formerly under-represented groups, it not only meets the needs of those groups but also makes everyone's education more expansive and substantive. It is the underpinning of the cultural literacy needed for our students and our nation to participate to the fullest extent in the global economy.

Teaching and Learning Mathematics in Patagonia

Betina Zolkower, assistant professor, middle childhood mathematics education

A few years ago, I conducted a 4-day workshop for K-9th teachers in San Carlos de Bariloche, Río Negro, a southern province in my native Argentina. I was invited by Ana Bressan, a central figure in mathematics education in the region. The workshop focused on realistic mathematics education (RME), an approach developed in The Netherlands I had become acquainted with while working at the City College of New York in the NSF-funded Mathematics in the City. Within RME, a paradigm based on the ideas of Hans Freudenthal (1905-1990), mathematics is conceived of as a human activity that consists of organizing the world. Freudenthal conveys his viewpoint on teaching and learning through the notion of guided reinvention—"a subtle balance between the freedom of inventing and the force of guiding" (*China Lectures*, 1991, p.48). The idea is that rather than transmitting mathematics as ready-made knowledge, teachers ought to guide students into mathematizing realistic situations that beg to be organized by mathematical means. The term realistic is meant not in the sense of really existing but in that of realizable, that is, situations within which students may imagine themselves, think, and act. For more than three decades, RME specialists in The Netherlands and worldwide have designed realistic instructional sequences made up of problems whose solutions are likely to bring about, via reinvention, the targeted pieces of mathematical knowledge.

Many participants in the workshop began incorporating some aspects of RME into their practice, such as moving away from solely relying upon stereotypical word problems toward including open-ended problematic situations into their instruction; incorporating mental computation activities into their lessons; building upon students' own productions in the teaching/learning process; making room for smooth transitions between informal and formal levels of mathematizing; intertwining the various math curriculum strands; and linking mathematics with other subjects as well as with the world outside of school.

The high level of enthusiasm about these ideas and an interest in further studying and experimenting with RME gave rise in February of 2000 to the *Grupo Patagónico de Didáctica de la Matemática* (GPDM). In this study group, which I facilitate alongside with Ana Bressan, 20 teachers meet biweekly to develop and try out realistic instructional sequences, reflect on the results, and write up these experiences. A major task of the group has been to translate and re-contextualize RME-inspired materials to fit the realities of their local schools. Thus far, three publications and eight conference presentations have resulted from this work.

Bariloche, a town known for its high mountains and big lakes, has around 100,000 inhabitants, about 45 schools, approximately 1,200 (K-12)

teachers, and almost 16,000 students. About half of the elementary teachers (400) in the local schools have been in contact with our project, via workshops, courses, or direct involvement in the study group. The GPDM includes faculty from the local Institute for Teacher Training in Mathematics Education, a fact that contributes to further institutionalizing our work.

Many of our group participants are routinely recruited by their school principals to organize workshops at their local schools. In these sessions, teachers present RME to their colleagues not as a set of expert recommendations, but as ideas emerging from their practice that rely on material gathered in their own classrooms. Another spin off of our work has been a series of workshops for parents. These events function as spaces for teachers to share with families what is happening in their math classes. More importantly, these sessions enable teachers to learn more about parents' occupations and interests, to then incorporate this as they plan their math lessons.

The group recently obtained funding to help strengthen the mathematical-didactical expertise of teachers from four schools located in 'high risk' areas of Bariloche. The students who attend these schools live in shantytowns, with inadequate nutrition, plumbing, and heat. Their parents, most of them unemployed, have little or no formal schooling. These institutions meet students' educational needs and also attend to matters of day care, health, and transition to work. We anticipate that RME will prove a fruitful approach to bridge the gap between students' informal mathematical knowledge and the mathematics they are expected to learn in school.

After the initial realistic turn, the GPDM is now experiencing a linguistic turn which is motivated by the following phenomenon: Teachers who use the same curriculum materials create different classroom cultures; in some cases, what results is a space open to fruitful exchanges of students' mathematical ideas, while in others it is more of the same ready-made school mathematics, albeit with a realistic touch. To account for this divergence, our analysis focuses on lesson transcripts from both GPDM and NYC classrooms using the functional grammar developed by M.A. K. Halliday and his disciples, results of which will be presented at an upcoming conference at the University of Comahue. Concurrent with this change of perspective was the incorporation to the GPDM of Sam Shreyar, from Lehman College, who contributes his expertise in activity theory and social semiotics. Our research is framed by a larger question: How can we use the functional-grammatical analysis of lesson transcripts as a tool for enhancing teachers' ability to orchestrate productive math discussions? We argue that teachers' role in structuring whole class interaction is paramount for all students to appropriate the ways of thinking, speaking, doing, and writing afforded to us by mathematics.

My involvement in the Patagonia project is crucial to the various facets of my work at Brooklyn College. First, my observations and work in the Bariloche schools provide me with invaluable experiences and insights which inform my methods and research courses. Second, my collaborative inquiry on classroom interaction with Bressan, Shreyar, and a sub-group of GPDM teachers has obvious implications for the critical examination of my mathematics education theory-in-action. Finally, this project is a reminder of what is possible in the apparently insurmountable task of making good mathematics teachers.

Diversity in Israel: David Yellin College of Education

[Barbara Rosenfeld](#), assistant professor, educational technology

The building sat a block away on the top of the hill in our residential neighborhood in Jerusalem. Men and women parked their cars in the street and made their way to the door. Women in traditional Arab headscarves as well as modestly dressed Jews walked up the stairs to the main entrance. The lettering on the building announced the home of The David Yellin Teachers College. I wondered what kind of programs the school offered and what kinds of technology were available. One day I decided to go there myself to see what the school had to offer.

After passing through the security check, I found myself in a wide hall with long adjoining halls. I wanted to find someone who could show me around. As I wandered through the building, I noted several displays of student artwork. I hoped to find someone who could speak English much better than I could speak Hebrew.

I peeked into an office and spied a young man working at a computer. I asked for directions to the main office, and learned that this fellow was a Russian student who was learning Hebrew. He did not speak English. We tried to converse in Hebrew, and from what I understood, he had been studying Hebrew for two years. (Certainly his Hebrew was better than mine!) He said that he had an uncle in Brooklyn. I tried to tell him that I taught at Brooklyn College

The student population at the college represents the diversity of the general population of Israel. There are Jews, both secular and religious, and Arabs, both Muslim and Christian, and immigrants from around the world. The curriculum is oriented toward tolerance and coexistence. Actually, I felt very much at home; this environment wasn't so different from the Brooklyn College campus. Students at Brooklyn College have uncles in Brooklyn, too!

Like Brooklyn College, The David Yellin College of Education is a public college and is under the auspices of the Ministry of Education. There are not too many secular teachers' colleges in Israel. Approximately 2500 students are enrolled at David Yellin; about half are in-service or adult learners. The programs are divided according to the age of the children: Early Childhood (K-2), Elementary (1-6), Intermediate (7-10). Students need to go to a university for teacher training above the Intermediate level.

David Yellin has a very popular Special Education program that trains teachers in both Jewish and Arab sectors. Because most of the schools in Israel are either Arab or Jewish – there are very few schools that are mixed – there are concurrent programs in the college for both Arab and Jewish teachers. A small group of Arab and Jewish students are selected for an honors track with special interdisciplinary courses. This special program gives Jewish and Arab students a wonderful opportunity to get to know each other and study the culture, history, and religion of their peers (both Jewish and Arab). They also work with school children aged 3-15 who are provided with role models for living together in peace and harmony.

I spoke with a professor at David Yellin who told me that teachers' colleges (as opposed to universities) in Israel serve as a means of upward mobility for many. He thought that there are more students from small towns, underdeveloped areas, and poor city neighborhoods in colleges, whereas the students at universities tend to be more from the middle class. The cost at David Yellin is about 12,000 NIS (New Israeli Shekels) per year or approximately \$2800. A university education costs more.

There are many immigrants in Israel. David Yellin provides a one year course to prepare those immigrants whose Hebrew is not sufficiently fluent to allow them to register for first year courses, for immigrant teachers who want to study Hebrew so they can work in their field in Israel, and for practicing teachers who wish to improve their knowledge of Hebrew and Jewish studies.

The diversity of students on the campus extends to the faculty and staff. Ramzie, who works in the computer support group, took me to see the computer labs. Ramzie's first language is Arabic and he spoke English very well. He has a degree in computer engineering from Hebrew University.

Ramzie explained that they have seven teaching labs and two open labs where students can work and chat online. There is also a lab for olim (immigrants) to learn Hebrew. All the labs have Internet access and programs are available in several languages including Hebrew, Arabic, English, and Russian. In one lab students were working in many languages on what looked like a Word screen. I noticed a student chatting online in Arabic. The computers were mostly Pentium 3's, but Ramzie said that they also had some brand new Pentium 4's.

Ramzie took me to the library – it is on four floors, and was impressive! There was a huge area for children's books (in English, Hebrew and other languages), a large education area, another area of books catalogued by the Dewey Decimal System, and a periodicals section with a fair selection of educational journals, many in English. I did not ask to see the microfilm section. The library is open to the public, which means that the neighborhood folks can come in and use it.

Although the politics in this part of the world have made it difficult for people of varying cultures to live together in peace, it is heartening to find a school where Arabs and Jews get along. They learn in both concurrent classes and in collaborative environments. David Yellin provides an inspiring and heartening model for the rest of the society.

Note: During July 2003, Barbara and her husband lived in Beit HaKerem, a residential section of Jerusalem.

Program Updates

College Now Welcomes New Director

Pieranna Pieroni joins the School of Education as executive director of the Center for Educational Change/College Now. Pieroni held the position of assistant director of outreach and tutoring at the Brooklyn College-based Howard Hughes Program in the Biological Sciences before joining College Now as instructor and co-coordinator of Teaching Scholars. To learn more about the program, stop by the College Now office, 2210 James Hall; call (718) 851-5209; or visit the College Now Website, <http://collegenow.cuny.edu>.

New Faculty

The School of Education extends a warm welcome to the following new faculty members:

Yoon-Joo Lee, assistant professor, special education, earned an Ed. D., in early childhood education, with specialization in special education, from Teachers College Columbia University. Her scholarly interests include the social experiences of toddlers with developmental delays in inclusive child care settings.

Priya Parmar, assistant professor, graduate literacy program, earned a Ph.D. in language and literacy education at Pennsylvania State University. Her scholarly interests are grounded in critical theory and cultural studies in which economic, political, and social justice issues are addressed. Her research interests include critical literacies --media, cultural, and political literacies--youth culture, hip-hop culture, and multicultural education

Wayne Reed, assistant professor, childhood education, has served the School of Education as undergraduate deputy and as acting assistant dean of specialized programs. He is currently the faculty liaison and coordinator of the Teaching Fellows program. Reed holds an Ed.D. from Teachers College, Columbia University, and a higher diploma in religious education from St. Patrick's College in Ireland.

Laurie Rubel, assistant professor, mathematics education, received her Ph.D. from Teachers College, Columbia University. Her areas of interest include probabilistic thinking, teacher education, and diversity in mathematics education. She recently completed a postdoctoral fellowship at the Diversity in Mathematics Center for Learning and Teaching, a collaboration among University of Wisconsin-Madison, University of California, Los Angeles, and University of California, Berkeley.

Shirley Steinberg, associate professor and program head, graduate literacy program. Joining the School of Education from Montclair State University, Steinberg holds a Ph.D., in curriculum and instruction from Pennsylvania State University and is author and editor of many books and

articles, including *Kinderculture: The Corporate Construction of Childhood*; *Multi/Intercultural Conversations: A Reader, Students as Researchers*; and *13 Questions: Reframing Education's Conversation*.

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