manuscript from its very inception with enthusiasm, energy, and care. Her wise counsel was essential at every turning point in the making of this book. Carola Suárez-Orozco participated in the FICGL and read various iterations of this volume. As usual, Carola's feedback was understated and brilliant. Over the last thirty years I have learned more about "love and work" from Carola than she will ever know. This book is for her.

## INTRODUCTION

Marcelo M. Suárez-Orozco
and Carolyn Sattin

# LEARNING IN THE GLOBAL ERA

Human societies, in all their breathtaking differences, face a common task: to transfer a range of skills, values, and sensibilities to the next generation. Socialization of the young is culturally defined and highly varied and is constantly evolving. All societies organize formal institutions to nurture in the next generation the qualities to carry forth the work of culture. For the first time in human history, basic education in formal schools has become a normative ideal the world over. Indeed, over the last five decades formal schooling has emerged globally as one of the most important societal institution for the education of the next generation.

Education, broadly conceived as formally structured, socially organized directed teaching and learning, has always been connected to, yet purposefully set apart from, the other institutions of society. Furthermore, the research literature has clearly established the multiple discontinuities between teaching and learning within versus out of schools.[1] Teaching and learning in schools tend to be highly formalized—for example, around strict time, subject, and level or grade demarcations—while learning outside of schools tends to be more fluid and informal (see Cheng, this volume). Schools usually privilege acontextual learning, whereas learning outside of schools is nearly always context-dependent and hands-on. Learning in schools is often organized to achieve increasing levels of abstraction, whereas learning outside school tends to be applied and designed to solve concrete problems. In general the focus in

schools is predominantly on *teaching*, whereas the focus outside of school is on *learning*. Of course, these dichotomies are heuristic and do not represent strict binary oppositions: in reality, there is fluidity in all human learning whether in or out of school.

While formal schooling is frequently set apart from other institutions in society—such as systems of kinship or religion or that of production and distribution of goods and services—some degree of calibration and convergence between what goes on in schools and what awaits youth in the posteducational opportunity structure is of course vital. Whether it is by shaping the sensibilities and habits of mind and heart of future citizens or by imparting skills to prepare them for the labor market, schooling is deeply interconnected with the economies and societies that encompass them. Schools should reflect—and reflect upon—the cultural and socioeconomic realities of the communities of which they form an essential part.[2] The main idea animating this book is that the schooling of youth today is largely out of sync with the realities of a global world. Precisely at a time when more is asked of formal education than ever before and when youth the world over need more cultural sophistication, better communication and collaboration skills, and higher-order cognitive skills for critical thinking, as well as the metacognitive abilities for reflecting on their own learning so as to become lifelong learners, most schools around the world risk anachronism and redundancy. Twenty-first-century economies and societies are predicated on increasing complexity and diversity—the twin corollaries of an ever more globally interconnected world. The lack of fit between what education *is* and what it *needs to be* is implicated in the three most important failures of schools today.

First, too many schools today are failing to engage youth in learning. In both the wealthy advanced postindustrial nations and in many developing countries, the predominant schooling experience for most youth today is one of boredom. Do a simple test: go to an average school in any of the global cites in the world and have students complete the sentence "School is _____." The most common response to that sentence is likely to be "boring." Schools have had to work hard to make children and youth epidemically bored and emotionally disengaged from the activity in school. It is indeed a considerable achievement, given the fact that the human brain is biologically programmed to take in the world, manipulate it, transform it—that is, to learn and to act upon what is learned (see Damasio and Damasio; and Katzir, Immordino-Yang, and Fischer, both this volume).

The second glaring failure of formal education is happening at the very vital global link between the wealthy global cities in the Northern Hemisphere and the developing world. Schools are failing to properly educate and ease the transition and integration of large and growing numbers of immigrant youth arriving in Europe and North America; many quickly become marginalized as racially, ethnically, religiously, and linguistically marked minority groups. In Europe, the failure to properly educate the children of Muslim immigrants became clear as the results of the Program for International Student Assessment (PISA) study sent shockwaves[3] and as countries such as Germany confronted their poor records in educating their neediest pupils—those originating in refugee- and immigrant-headed homes (see Hugonnier; Süssmuth; Crul; Wikan, all this volume). In the United States, the enduring racial achievement gap,[4] as well as the very uneven educational trajectories of the children of Latin American, Caribbean, and some Asian immigrants—now the fastest growing sector of the U.S. child population—augurs trouble ahead as the so-called new economy is increasingly unforgiving of those without the skills and credentials required for functioning in the knowledge-intensive sector of the opportunity structure, and as a high-school diploma has yielded steadily diminishing returns (see, for example, Suárez-Orozco, Suárez-Orozco, & Todorova 2007; see also Myers 1998). The results of these general trends are painfully obvious in multiple measurable ways: from the high dropout rates among immigrant, ethnic, and racial minorities in many wealthy countries, to stark differences in achievement patterns between native and racialized minorities (see Crul; and Süssmuth, both this volume). The furious rioting in French suburbs in November 2005, where second-generation children of immigrants performed for the global stage their alienation from and anomie in relation to French social institutions is but one recent example of the consequences.

Third, the persistent under-enrollment of children in schools in poorer regions of the developing world, as well as the variable quality of many of these schools, is among the most alarming failures of schooling in the twenty-first century. Approximately 200 million children and youth are not enrolled in primary and secondary schools today.[5] For those who are enrolled, the education they are likely to receive will be vital (see LeVine, this volume) but for most of them, perversely, not enough to thrive in the era of globalization (see Cheng, this volume). These children and youth are falling further and further behind their peers in the wealthy nations.[6]

Education faces new challenges in a world more globally connected yet ever more unequal, divided, and asymmetrical.[7] For many youth
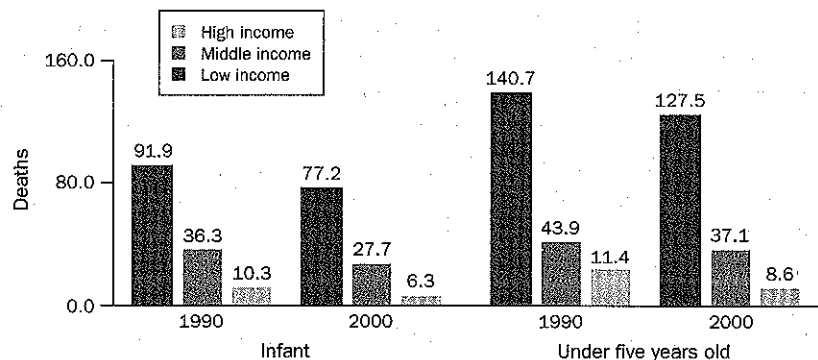
**Figure I.1** Infant and under-five mortality rates in high-, middle-, and low-income countries (per 1,000 live births). SOURCE: University of California Atlas of Global Inequality.

growing up in the developing world, crippling poverty continues to define everyday life. It is estimated that every 3.6 seconds, a person dies of starvation: that person is usually a child under the age of five. The infant and under-five mortality rate in low-income countries is over fourteen times greater than in high-income countries.[8] (See figure I.1; see also www.worldbank.org/depweb/english/beyond/global/glossary.html). About 600 million children in the developing world live on less than one U.S. dollar a day (UNESCO 2006). A recent World Bank study suggests that a large proportion of children growing up in India may be cognitively impaired—largely because of malnutrition—before they ever reach school (see Pritchet & Pande 2006).[9] Global poverty deprives one billion children of the basic resources for life: clean water, proper nutrition, safe shelter, and the proper supervision required for survival and positive human development (UNESCO 2006). As a consequence, life expectancy at birth in low-income countries is on average more than twenty years less than in high-income countries (see figure I.2). Individual country comparisons reveal even more striking inequalities: the average life expectancy at birth in Malawi is 38.8 year versus 78.9 years in Canada. In other words, the average Canadian born in 2000 is expected to live forty years longer than the average Malawian born in the same year (see the appendix to this introduction for additional data on global comparisons of birth, death, and fertility rates).

Basic primary and secondary education remains an elusive luxury for millions and millions of children (see figure I.3; see also Cohen, Bloom, & Malin 2006); illiteracy remains a worldwide epidemic (see figure I.4).
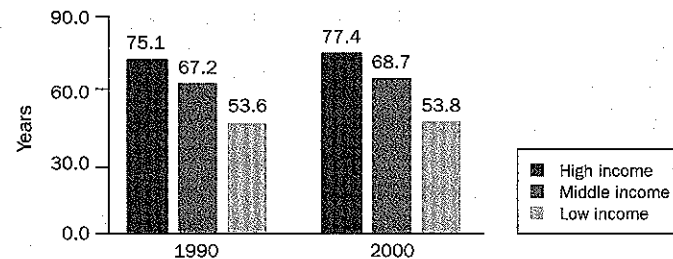


**Figure I.2** Life expectancy at birth in high-, middle-, and low-income countries. SOURCE: University of California Atlas of Global Inequality; *see also www.worldbank.org/depweb/english/beyond/global/glossary.html.*



**Figure I.3** Gross enrollment ratios in high-, middle-, and low-income countries. SOURCE: University of California Atlas of Global Inequality; *see also www.worldbank.org/depweb/english/beyond/global/glossary.html.*



**Figure I.4** Illiteracy rates in high-, middle-, and low-income countries. SOURCE: University of California Atlas of Global Inequality; *see also www.worldbank.org/depweb/english/beyond/global/glossary.html.*
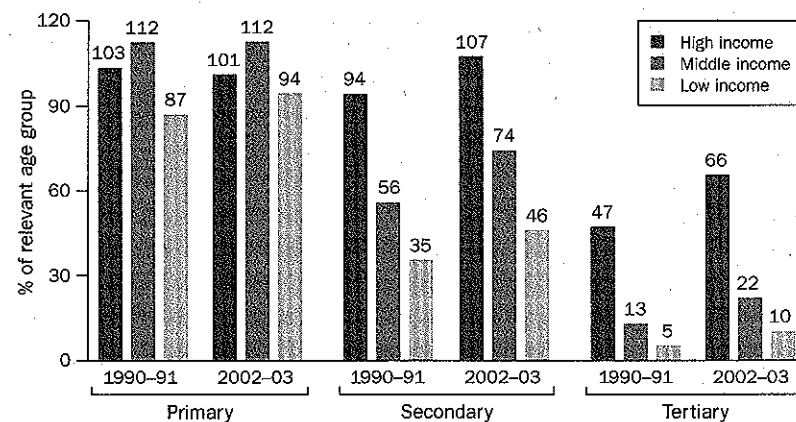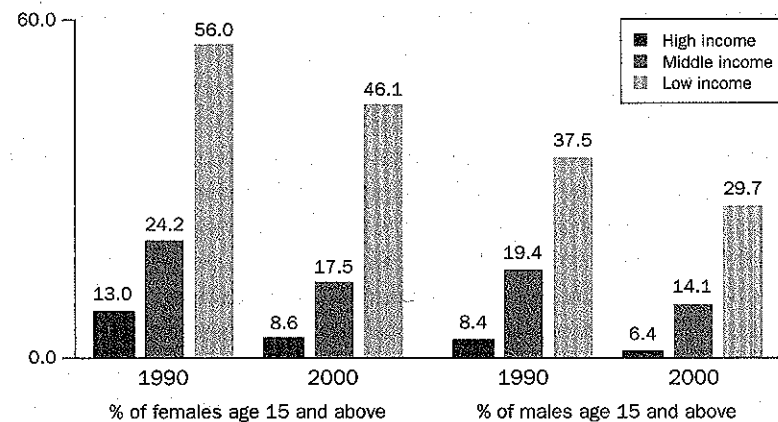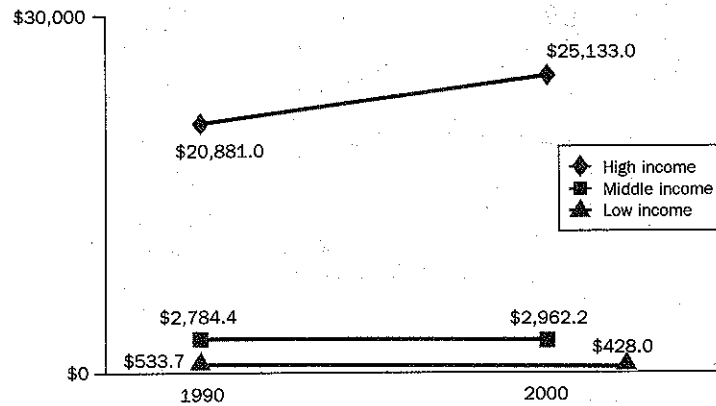
**Figure I.5** GDP per capita by income level (constant 1995 U.S. dollars). SOURCE: University of California Atlas of Global Inequality; *see also www.worldbank.org/depweb/english/beyond/global/glossary.html.*

Yet everywhere today, more is asked of education. It is the Camino Real for development and a powerful engine of wellness. The data presented by Robert LeVine (this volume) suggest that education—almost any form of education that inculcates and supports basic literacy—generates powerful virtuous cycles. A recent UNICEF study concludes: "Education is perhaps a child's strongest barrier against poverty, especially for girls. Educated girls are likely to marry later and have healthier children. They are more productive at home and better paid in the workplace, better able to protect themselves against HIV/AIDS and more able to participate in decision-making at all levels" (UNICEF 2004, 1; see also Bloom 2004). The worldwide disparities in health and education mimic a massive and growing gap in income distribution worldwide (see figure I.5).

### SCHOOLING AS USUAL

In the meantime, schools in most parts of the world continue business as usual. In some parts of the developing world, ministries of education continue to uncritically borrow and copy materials from the developed world that are at once irrelevant to their own realities and controversial and anachronistic in the source countries—the testing craze is but a recent example.[10] Throughout the world most schools tend to share a general orientation toward an earlier era of social organization: the early industrial moment of mass production, with the promise of lifelong jobs, in the context of bounded and homogeneous nation-states. These formations are increasingly irrelevant to the realities of both the developing nations and the wealthier nations of the North. Schools are conservative by nature: they privilege established traditions, precedent, and long-honored pedagogies. Furthermore, they are both averse and slow to change (see Hugonnier, this volume). And when change happens inside schools, it is often reactive and slow to take hold. Howard Gardner has argued that education typically changes because of shifts in values (such as from a religious to a secular orientation); new scientific breakthroughs that reorient our understanding of the human mind and learning such as the development of the new field of mind, brain, and education (see Damasio & Damasio; and Katzir, Immordino-Yang, & Fischer, both this volume); or broad historical and social forces, such as globalization. Gardner further claims that there is a new tension between the glacial pace of institutional change in ministries of education and schools and the rapid social, economic, and cultural transformations brought about by the forces of globalization (Gardner 2004).

But what is globalization? Why does it matter to education?

Globalization is the ongoing process of intensifying economic, social, and cultural exchanges across the planet. It is an ancient dynamic that perhaps originated sixty thousand years ago when humans first embarked on a journey that would take us, as a species, out of the African savanna to explore and transform the globe. Globalization is about the increasing integration and coordination of markets, of production, and of consumption. These global economic forces are stimulating the migrations of people in unprecedented numbers from and to every corner of earth. Globalization is about exchanges of cultures that make the old boundaries, as well as the aspired cultural coherence and homogeneity of the nation-state, increasingly untenable. These new global realities are challenging schools everywhere and in multiple ways. In this book we focus on two interrelated domains of rapid global change: new socioeconomic formations and new global migrations. As Kai-ming Cheng argues in this volume, there has always been a synergism between schooling and local socioeconomic realities. But economies are now global in scope and are generating unique opportunities, challenges, and constraints.

Indeed there is a rapidly expanding internationalization of production, distribution, and consumption of goods and services. Local economies are becoming integrated into complex webs of global relations. First, new global networks of production—fueled by increasing levels of international

trade, foreign direct investment, migrant remittances, and capital flows, which now approximate a trillion dollars a day—set the pace for socioeconomic life in every continent of earth. Second, production is increasingly deterritorialized as certain jobs can be done nearly anywhere on earth (see Levy & Murnane, this volume). Third, over the past two decades the insertion of China, India, and the former Soviet Union into the global system of production, distribution, and consumption has added approximately 1.47 billion workers to the worldwide labor force.[11] As a result, today there are 300 to 400 million highly educated Indians, Chinese, and Russians competing for jobs with graduates from the elite research universities in the Western world. Local economic realities are now thoroughly embedded in ever expanding global networks.

Global patterns of mobile capital and mobile production, distribution, and consumption of goods and services are stimulating and accelerating international migration. With between 185 and 200 million transnational migrants, migration is now a global phenomenon involving every region of the world (see Süssmuth, this volume). Some regions are becoming important centers of out-migration (the so-called sending countries of emigration). For example, over the past decade, on average one million Latin Americans have left the subcontinent every year. Asia, likewise, is experiencing the largest human migration in history. In these regions, migration is the single most important source of foreign exchange via the international remittances sent back by workers in the diaspora. Data from multiple sources, including the International Monetary Fund (IMF), suggest that remittances to developing countries have been rising steadily. Currently, "they are almost comparable to FDI [foreign direct investment], and exceed both non-FDI private capital inflows and official aid in magnitude" (International Monetary Fund 2006).[12] For the countries of "Lesotho, Vanuatu, Jordan, and Bosnia and Herzegovina remittances represent nearly 25 percent of their GDP. The main sources of recorded remittances are the United States, Saudi Arabia, Switzerland, Germany, and France" (International Monetary Fund 2006). Indians and Mexicans in the United States, Turks in Germany, and Filipinos and Egyptians in Saudi Arabia are now the economic lungs of the countries they leave behind. Their remittances are the economic oxygen keeping countless individuals, families, and communities in their home countries from asphyxiating.

Mexico is a prime example of how some parts of the world are becoming important transit regions. (Of course, over the past century, Mexico has also emerged as an important country of emigration.) Now migrants from every continent on earth routinely choose Mexico as the
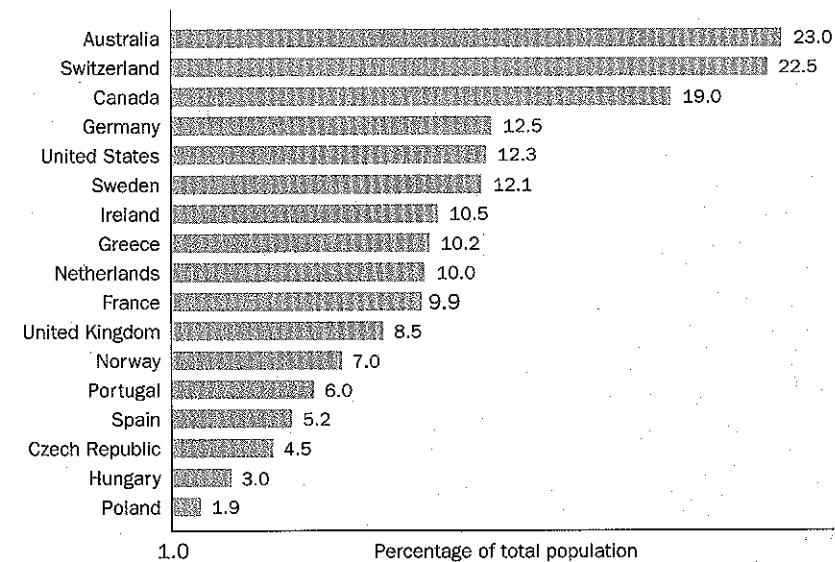
Figure I.6 Foreign-born population as a percentage of total population, 2006.
SOURCE: EuroStat 2006 (http://epp.eurostat.ec.eu).

favored route to enter the United States—mostly without legal documentation. Yet other regions of the world—notably the wealthier, advanced postindustrial democracies of the North but also countries like Australia and Argentina—continue to attract millions and millions of immigrants year after year (see Süssmuth, this volume). The United States is in the midst of the largest wave of immigration in its history, with over a million new immigrants per year for a total foreign-born population of over 35 million people, equaling 12 percent of its total population. In Canada, Switzerland, and Australia the rates of immigration are nearly double the U.S. rate (see figure I.6).

In Europe a particular demographic predicament—rapidly aging populations combined with below-replacement fertility rates—are producing the threat of a deep demographic winter (see Süssmuth, this volume). New estimates suggest that the countries of the European Union might need an estimated 50 million new immigrant workers over the next five generations, or otherwise face enormous labor shortages (see figure I.7) —at a time when the immensely generous European welfare system will need more productive workers to pay for the projected massive retirements of the aging population. More immigration, not less, is in the future of most European nations.
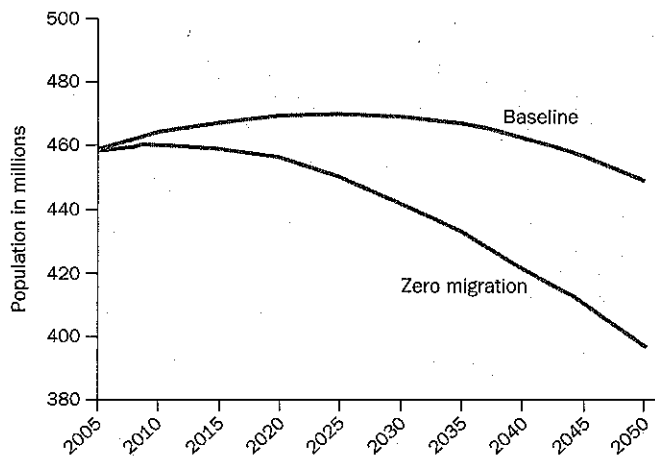
**Figure I.7** Population projections for European Union twenty-five member states. SOURCE: EuroStat 2006 (http://epp.erostat.ec.eu).

Likewise in the United States, where immigration always generates deep ambivalence at present even as it is celebrated looking backward, further immigration is likely to be needed in the decades ahead because of a demographic predicament unfolding before our eyes.[13] As the nearly 80 million baby boomers continue to retire in growing numbers over the next generation and as the population of white European origins continues to show lower fertility rates than Hispanic minorities, the United States will face complex options. In the words of President George W. Bush, "The retirement of the baby-boom generation will put unprecedented strains on the federal government. By 2030, spending for Social Security, Medicare, and Medicaid alone will be almost 60% of the entire federal budget. And that will present future Congresses with impossible choices—staggering tax increases, immense deficits, or deep cuts in every category of spending." By then, the United States very likely will once more turn to immigration to deal with its "impossible choices."[14] Immigrant workers will once again be summoned, this time to take care of retired citizens, to pay into the social security system, and to help the country maintain its economic vitality.

Other regions of the world are also experiencing massive population movements because of globalization. The insertion of China into the global economy has led to one of the largest migratory chains in human history: over 150 million Chinese are now migrants, some migrating to other

nations but most from the rural hinterlands into the rapidly globalizing coastal cities.[15]

With global migrations come new challenges to schools. The children of immigrants are the fastest-growing sector of the child and youth population in a variety of advanced postindustrial nations, including Australia, Canada, and the United States as well as Sweden, Germany, the Netherlands, and France. These new demographic realities have immense implications for education and schooling in sending, transit, and receiving countries.

But schools in many countries of immigration have been slow to respond to the challenge of managing the transition of immigrant youth. Inertia in the face of rapid change has led to many missed opportunities and outright failures. Is teaching the glories of the Gallo-Roman period to students in the Paris suburbs, most of whom originated in the former colonies of the Maghreb, the best way to engage them? Might there be more agile ways to engage immigrant students, many of whom are deeply alienated, are leaving schools without the tools to function in postindustrial France, and are increasingly gravitating to the underground economy or a life of petty crime? Maurice Crul and Rita Süssmuth (this volume) offer important insights into Europe's uneven record of managing the education of new immigrants and the transition of their children to the labor market.

New global realities increasingly define the contexts in which youth growing up live, learn, love, and work. Indeed, globalization in its various manifestations—economic, demographic, sociocultural—is a quotidian part of the experience of youth today. Theirs is a world in flux where the rate of change is of an order never seen before.[16] In cities like Frankfurt, London, and New York, youth live where global cultural flows are increasingly normative. North and South, East and West, youth are creating and exchanging ideas with others originating in faraway places; whether living in Bangalore, Brussels, or Buenos Aires, they wear similar clothing, share tastes in music, follow the achievements of today's global sports heroes—such as soccer stars Ronaldinho (a Brazilian who plays in Spain) and Crespo (an Argentine who plays in England)—and gravitate toward the same websites. This is the first generation in human history in which the fortunes of youth growing up far apart will be demonstrably linked by ever more powerful global socioeconomic and demographic realities.[17]

In addition to transnational economics and mass migrations, the high-octane fuel that gives global interdependence speed includes the

information, communication, and media technologies that connect youth through exchanges of ideas, symbols, and tastes across the world instantaneously. These communication networks, especially high-speed, low-cost connections and the digitization of data, have another global effect with deep consequences for formal education: they are putting a huge premium on knowledge-intensive work and making possible the deterritorialization of entire economic sectors. Indeed, schools today need to inculcate information and media literacy skills that were not on educators' radar screens even a decade ago. As Levy and Murnane argue (this volume), from now on, tasks that are rule-based and easily broken down into constituent units can be done anywhere in the world: complex data for a tax company based in Boston can be entered in Bangalore, X-rays for a hospital in Brussels can be read and analyzed in Buenos Aires—at a fraction of the cost.[18]

Yet the ethos in most schools is anachronistic relative to the new realities animating the world of youth. Precious few schools today are organized to nurture the habits of mind, higher-order cognitive and metacognitive skills, communication skills, interpersonal sensibilities, values, and cultural sophistication needed to engage an ever more complex globally linked world. Schools continue to teach sclerotic facts and have no way of coping with the increasing ambiguity, complexity, and linguistic, religious, and ethnic diversity that defines the world. The work of education in the twenty-first century will be to nurture and stimulate cognitive skills, interpersonal sensibilities, and cultural sophistication of children and youth whose lives will be engaged in local contexts and yet will be suffused with larger transnational realities. Schools that are neither anachronistic nor irrelevant will be necessary to teach today's youth to thrive in the complexity and diversity that define the global era (see M. Suárez-Orozco & Qin-Hilliard 2004).

In March 2005 the contributors to this book convened with many other scholars, policy makers, and leaders of various teacher education programs in an international conference in Hässelby Castle outside the old city of Stockholm in Sweden. The First International Conference on Globalization and Learning (FICGL) brought together leading scholars, researchers, educators, and policy makers from around the world to examine the future of education in the global era.[19] The presentations and exchanges at the conference endeavored to clarify the educational challenges and opportunities presented by globalization and to articulate a long-term research agenda addressing these concerns. Conference participants identified research themes, and researchers in anthropology, cognitive science,

communication, economics, education, neuroscience, psychology, and other fields formed collaborative, interdisciplinary discussion teams.

The conference hosted over seventy researchers, senior scholars, policy makers, and educators from around the world. These participants brought to the conference an extraordinary wealth of experience, expertise, and international stature. Conference presenters included such esteemed policy makers as Rita Süssmuth, former Speaker of the German Bundestag and former minister of youth, family, health, and women's issues; Hanna Damasio and Antonio Damasio, among the world's leading neuroscientists; Kai-ming Cheng, vice rector of the University of Hong Kong and renowned authority on education and its relationship to changing economic landscapes; Robert LeVine, senior anthropologist at Harvard and one of the world's leading scholars on the anthropology of socialization.

We purposefully chose to meet in Stockholm because, by all accounts, Sweden has come to embody many of the fundamental traits we associate with globalism: it is one of the world's most open economies, it is leading the way in new information and communication (especially wireless) technologies, it is increasingly a multicultural society with growing numbers of highly visible immigrants and refugees from virtually every corner of earth, and historically it has been one of the most equitable countries in the world. How, then, is this globally open democracy that privileges equality dealing with the profound and often destabilizing changes associated with globalization? How is it managing its extraordinary new demographic diversity? Are its schools meeting the challenge of educating all children and imparting to them twenty-first-century skills and sensibilities? To explore these and other questions, we decided that part of the conference should take place in a local school dealing with complex global realities.

In addition to the scholarly and scientific work typical of international conferences—including the development of new scholarly papers addressing clearly demarcated research problems, presentation of new and heretofore unpublished data, special keynote addresses, panel presentations, and group discussions—a working visit to a local school would allow us, we hoped, a window into the concrete realities of globalization and education that we were to discuss in more abstract scholarly exchanges. The visiting group included senior international scholars of education with research experience in Africa, Asia, the Americas, the Caribbean, Europe, and the Middle East. We spent half a day at the Tensta Gymnasium, an experimental high school outside Stockholm located in a highly segregated

immigrant enclave situated next to Kista, the area known as "Sweden's Silicon Valley" for its cutting-edge information and communication technology (ICT) research and development facilities.

## A SMALL UNITED NATIONS: THE STORY OF TENSTA

We chose Tensta because of its location (next to a twenty-first-century-science city), demography (children of displaced peoples from nearly every troubled spot on earth are now enrolled in the school), its global outlook and ethos, and most important, its proactive efforts to transform itself to meet the challenges of providing a twenty-first-century education to its ever more diverse student body. We visited with teachers and students and heard from the school leadership about their experiences with school change. Tensta staff and students were also invited as special guests to the conference. Our visit to Tensta helped frame and inform many discussions and exchanges during the conference, as reflected in various chapters in the book.

The Tensta Gymnasium, like many multiethnic schools in global cities, had been struggling with declining enrollments (because Sweden is an all-voucher system, some students choose to take their vouchers to more academically rigorous schools in central Stockholm), a persistent dropout problem, and an epidemic of student disengagement and boredom. At Tensta, globalization took the form of rapidly changing demographic and cultural realities. Each wave of immigrants and refugees brought with them new issues and challenges. Gymnasium principal Inger Nyrell noted in a subsequent interview: "Immigration in Stockholm has been increasing very rapidly in the past ten to fifteen years. But the groups that come here have changed. Earlier on it was people from South America, Turkey, Iran, and Europe, depending on different crises in different countries. Now we have immigrants and refugees from other parts of the world—mostly from Asia but also from Africa. These groups have different characteristics from the earlier immigrants. We now have a big group of immigrants from Somalia that is very noticeable in Tensta. They come from a very simple life in country villages in Somalia straight into the modern city life."[20]

A new reality played out in school, including a chorus of multiple languages heard in the hallways, new customs, and veiled girls in nearly all classrooms, but also comprising different cultural practices such as female genital mutilation and arranged marriages—practices that unsettle Swedish sensibilities and gender norms and push the limits of toler-

ance in one of the most tolerant societies ever known (see Wikan, this volume). How then is a school to create an inclusive, engaging environment to nurture its tremendously diverse new students so they may thrive in a twenty-first century global society?

The story of Tensta's transformation is itself a story of global cooperation—in this case with its sister institution, the Ross School in New York. One of the lessons of this experience is that schools do not need to reinvent the wheel: innovation can sometimes travel across oceans, languages, and cultures. An ambitious new Ross-Tensta program of collaboration had begun three years prior to our visit. Over the course of those three years, teachers and administrators from the Ross School worked closely with their counterparts in Tensta to introduce a series of curricular, pedagogical, and architectural innovations designed to enhance student engagement. Tensta chose to partner with the Ross School because the leadership was intrigued by Ross's integrated curriculum, its efforts to privilege interdisciplinary thinking and global understanding, its focus on cultural history, and its sophisticated deployment of state-of-the-art media and information technologies. Since 2003, teachers and administrators from the Ross School have worked closely with their Tensta counterparts. They visited each other's schools, and together they developed a series of workshops to guide the development of the new Tensta Gymnasium model. Over time, Tensta's curriculum, learning spaces, and approaches to wellness and nutrition began to change—a process whereby the imported ideas and practices from the Ross School were adapted to local Swedish sensibilities, traditions, and current realities and the changing student body's needs.

Infusing technology into every aspect of the school was a cornerstone of Tensta's restructuring. Each student was provided with a state-of-the-art laptop computer and access to a wireless connection network during the school day. A series of integrated units was developed, along with a new cafeteria serving balanced and ethnically appropriate meals, and interdisciplinary team teaching was introduced, requiring the cooperation of teachers whose main disciplines had been artificially separated. Intensive teacher training was provided, and teams of teachers were assigned to jointly teach cohorts of students. Partnerships with local universities and businesses began to take root. As the ethos of Tensta began to change, students began to feel the difference.

During a prior visit, a group of us spent time in various Tensta class-rooms. One of the biology classes we observed included students from Iran, Iraq, Somalia, Ethiopia, the former Yugoslavia, and Chile and a few from mainstream native Swedish homes. Nearly 80 percent of the students at the Tensta Gymnasium are of immigrant or refugee origin. (Approximately 40 percent of all students in Stockholm schools are foreign-born or children of foreign-born parents). The students in this classroom all spoke some English, in addition to their own home languages such as Somali, Arabic, Farsi, and Spanish, as well as Swedish. They all had their wireless PCs out and were engaged in an Internet-based research project, using their wireless computers to visit sites in multiple languages and e-mail each other across the aisles, as well as peers around the world.

The Swedish teacher told us how she had worked to integrate the biology unit with cultural, historical, and geographic materials relating to the origins of agriculture in Mesopotamia—the area of the world where many of the students originated. What struck us about this classroom was how an experienced teacher working in a media-rich environment enabled a highly heterogeneous group of students to deeply engage with complex interdisciplinary materials. The computers were a critical part of engendering and maintaining student focus and engagement. A student from Chile who was working closely with a classmate from the former Yugoslavia and another from Iran was excited to show one of us (Marcelo Suárez-Orozco) how she found in a Spanish-language website new data for their joint research project that they had not been able to find on Swedish-language sites. During our visit, the teacher encouraged the students to work in teams and scaffolded their knowledge so as to achieve a higher-order understanding of the problem at hand. She also encouraged the students to reflect on their own learning by subtly suggesting how they could apply what they had learned in other units to the new problem—hence nurturing their metacognitive abilities.

Toward the end of yet another visit to the school, we asked a (convenience) sample of students what they thought about the new program at Tensta. The laptops, they said, were a great idea, certainly at the top of their list—along with the better food (i.e., ethnic foods) in the cafeteria and the team teaching among the faculty. A young man from Somalia said, "Now we learn better because we go over similar problems from many different perspectives with different teachers." Another Somali student, wearing a veil and carrying a full load of books under one arm and her brand-new laptop under the other, responded: "We, the students, are now at the center of the school. I like the new computers, the cafe-

teria, and integration of subjects." By the end of the third year, word of mouth was that Tensta was becoming a "hot" school with an innovative program. Enrollment was up, and teachers and students seemed to agree that the changes were beginning to engage a highly diverse group of students in ways not seen before. When I asked a teacher how she knew her students were more engaged now, her answer said it all: "They stay working on their project during recess and don't want to go home at the end of the day."

The wholesale reform of the Tensta Gymnasium was reflected not only in students' comments and visible engagement and teachers' assessments but also in the significant increase in demand for enrollment. During a final visit, the school leadership reiterated, with the muted Lutheran pride so typical of Sweden, that Tensta, as a result of the Swedish voucher system, had been losing its brightest and best students to other schools. Now, the principal said, the school was seeing a twofold increase in the number of students who selected it as their first choice—and not just immigrant students from the neighborhood but growing numbers of native Swedish students as well. Over time, teachers began to sense a new kind of student engagement and performance displacing the former boredom and anomie that is a deadly reality in diverse student bodies in global city schools. As a result of Tensta's innovations, the school now offers regular tours to visiting delegations from all over Sweden and from other European countries dealing with changing student populations and hence with the new cultural realities of the twenty-first century.[21]

Classrooms such as Tensta's are beginning to emerge in a number of the world's global cities. Tensta testifies to the main pillars that define learning for the global era: increasing diversity; increasing complexity; premiums placed on collaboration and interdisciplinary work, taking multiple perspectives on problems, and moving across language and cultural boundaries; and the sophisticated use of state-of-the-art technologies to enhance student engagement.

Schools like Tensta are an important experiment in Europe as the old continent continues to struggle with the adaptation of its rapidly changing new immigrant and refugee populations. Whereas most earlier immigrants immediately following World War II originated in Europe and Turkey—such as Portuguese in France, Italians in Belgium, Spaniards in Switzerland, and Turks in Germany—the most recent immigrant and refugee waves have largely come from the Middle East (e.g., Iran and Iraq), central Asia (Pakistan, Afghanistan), and Africa (Somalia, Ethiopia). The new arrivals challenged Tensta Gymnasium in multiple ways. A

senior administrator explained: "What happens is that when immigrants from, for example, Somalia immigrate to Sweden, it is like traveling two hundred years in time for them. The expectations and the need for education are extremely different now compared to ten years ago, when the immigrant groups were composed differently. The people coming from Eastern and Southern Europe (as well as those from South America) had a completely different kind of educational background. The new waves of immigrants from Africa have a big impact on Sweden, both in the high schools and the elementary schools. During the last ten years the composition of the immigrant students at Tensta has definitely shifted to a different kind of school background. They have a different experience, which we need to pay attention to. In many cases the students had maybe just three years of village school" (December 2005 interview conducted at Tensta).

Further, whereas earlier immigrants and refugees found plentiful work at good wages in rapidly growing postwar European industries, those jobs had evaporated by the early 1970s, and the unemployment rates in the immigrant enclaves began to soar, reaching more than 40 percent in some immigrant neighborhoods. Today and moving forward, the Swedish economy, like those of other advanced postindustrial nations, will increasingly depend on innovation in the knowledge-intensive sector; that is, in the creation of jobs that can stimulate status mobility. Formal education, therefore, will have a much more profound influence on the way children of immigrants and refugees make the transition to their new societies and, we hope, become productive and engaged citizens contributing to the collective good.

## FOSTERING CULTURES OF ENGAGEMENT

Children and youth growing up today are more likely than in any previous generation to face a life of working and networking, loving and living with others from different national, linguistic, religious, and racial backgrounds. The Tensta classroom is a microcosm of the global classrooms of today. They are challenged to engage and, in new ways, work through competing and contrasting cultural models and social practices that include gender, language, and the complicated relationships between race, ethnicity, and inequality. Transcultural communication, understanding, empathy, and collaboration are no longer abstract ideals but now have a premium. It is not as simple as the one-way assimilation and accommodation models according to which ethnic, racial, linguistic,

and religious minorities learn the codes of the majority society to get along and get ahead. Much more is needed: majority children, too, will benefit by mastering other cultural sensibilities and codes.[22]

An intellectually curious, cognitively autonomous, socially responsible, democratically engaged, productive, and globally conscious member of the human family in the twenty-first century cannot be educated in the twentieth-century factory model of education. The regimented mastery, internalization, and mechanical regurgitation of atomized facts and rules that served the industrial era are anachronistic. The redundancy in much of today's schooling is surely the elephant in the (class)room in the rich societies of the North, reflected in the pandemic of boredom and emotional detachment from school among children and youth in European and U.S. schools.[23] But there are even more alarming problems in schools than boredom.

The failure to properly engage, educate, and integrate large and growing numbers of racial and ethnic minorities including immigrant and refugee-origin youth is creating new threats (see Wikan, this volume). The devastating "home grown" terrorist plots and attack in London (July 2005 and August 2006) and the subsequent "home grown" terrorist plots in Canada (June 2006) suggest just what is at stake when the children of immigrants are alienated from their new societies. The fact that nearly half of the French prison population is of North African Muslim origin (a similar statistic applies to the Netherlands), a number well out of proportion to this group's representation in the general population, reveals a pattern of enormous gravity that casts an ominous shadow on Europe's future.[24]

This book is predicated on the claim that an education for the global era is an education for lifelong cognitive, behavioral, and relational engagement with the world.[25] The skills, sensibilities, and competencies needed for identifying, analyzing, and solving problems from multiple perspectives will require nurturing students who are curious and cognitively flexible, can tolerate ambiguity, and can synthesize knowledge within and across disciplines. They will need the cultural sophistication to empathize with their peers, who will likely be of different racial, religious, linguistic, and social origins. They will need to be able to learn with and from them, to work collaboratively and communicate effectively in groups made up of diverse individuals.[26] An education for globalization should aim at nothing more nor less than to educate "the whole child for the whole world."[27]

Globalization will continue to demand more of schools at a time when formal education is facing a deep malaise. In rich countries, millions of children are bored and large numbers of ethnic and immigrant minorities are leaving school without the tools to become engaged citizens in their new countries (Suárez-Orozco, Suárez-Orozco, & Todorova 2007). In the developing world, millions and millions of children and youth who should go to primary and secondary schools will not be enrolled. Devastating as these numbers are, more worrisome yet is the fact that millions of children are enrolled in what can only be called "schools of hatred," where they are mostly learning pre-scientific, pre-rational habits of mind that will do nothing to help them cultivate the skills and competencies required for productive and critical citizenship in the global era. How then should we think of learning and education in these troubled times?

## PART ONE: INTERDISCIPLINARY APPROACHES TO LEARNING AND UNDERSTANDING IN THE GLOBAL ERA

In Part 1 of this book, we examine the function and responsibilities of schools to equip all youth with the skills and knowledge required to lead successful lives in increasingly complex, globally linked twenty-first-century societies. By and large, the wealthy advanced postindustrial democracies continue to fail to satisfactorily address the needs of all students, particularly the needs of immigrant, refugee, and racial-minority students. We need a new agenda for the institutional and cultural reforms that school administrators, educators, and policy makers must undertake in order to respond to the demands and challenges of globalization. We start Part 1 with a portrait of promising educational practices employed by an exemplary group of teachers in Massachusetts, and an exploration of the difficulties they encounter in their attempts to engage students in the study of globalization. This chapter offers a view of what effective twenty-first-century classrooms might look like and points to important areas of research needed to improve current understanding of students' experiences in living and learning within the context of globalization.

In the chapter "From Teaching Globalization to Nurturing Global Consciousness," Veronica Boix Mansilla and Howard Gardner of Harvard University's Project Zero share their experiences and insights about successful practice in the teaching of globalization and illuminate the obstacles that teachers may confront when endeavoring to broach such

complex, often charged topics in the classroom. Through their work with students and teachers in Massachusetts schools, the authors witnessed and participated in innovative forms of student learning on focused topics of globalization. They identify strategies that educators may incorporate to facilitate students' development of "global consciousness," a term Boix Mansilla and Gardner introduce and define in this chapter. Citing specific examples, the authors claim that interdisciplinary lessons that "put students in the center of contemporary debates" and require them to investigate "real-life forces shaping the planet" nurture a grounded understanding of the meaning and processes of globalization and how it directly relates to their lives, in turn leading to their development of "global consciousness." The idea of putting the child at the center of learning resonates powerfully with what we witnessed in the Tensta Gymnasium.

Boix Mansilla and Gardner, identifying teachers' own limited understanding of globalization as an important challenge to successful teaching, delineate four core aspects of globalization that may help teachers focus their perspectives and lessons: economic integration, environmental stewardship, cultural encounters, and governance and citizenship. The goal of such lessons is "to engage students affectively in a reflection about their role as key actors in a dynamic, often uneven, matrix of economic and cultural exchanges . . . [and] to stimulate [them] to use this emerging sense of self to guide their commitments as consumers or to reinterpret their immigrant family history as part of a larger contemporary phenomenon." Thus, ultimately, the authors believe that educators must understand their responsibilities and "the purpose of the enterprise as one of nurturing *global consciousness*."

Boix Mansilla and Gardner devote a significant part of their essay to a discussion of how various academic disciplines engage with the concept of consciousness, historical consciousness in particular. They claim that consciousness functions, inter alia, to orient humans in the place and time in which they live. This background serves to inform the authors' thorough explanation of global consciousness and schools' role in helping students develop their own. The authors' detailed breakdown of the cognitive-affective capacities of global sensitivity, global understanding, and global self provides readers with a valuable map for understanding the concept of global consciousness. Their comprehensive definition and various examples strengthen their call to teachers and schools to reinvent their roles and take ownership of the new need to assist all students in their transition to becoming worldly, interconnected, responsible global citizens of the twenty-first century.

A growing corpus of basic research on learning and understanding is emerging from the nascent field of mind, brain, and education, which promises to revolutionize our thinking about learning and its relationships to cognition and emotion. Moving forward, this new work should inform educational practices to be better synchronized with changing understandings of how humans learn. In the chapter "Understanding Cultural Patterns," Peter Gärdenfors of Lund University's Cognitive Science Department examines the processes by which humans make meaning and thereby illuminates how students learn and how to best structure lessons to achieve maximum understanding. Gärdenfors cites scientific data to support his main claim that the perception of patterns is a fundamental cognitive building block of understanding. He recommends teaching students to identify and interpret patterns rather than to learn isolated facts. Further, he stresses the importance of developing familiarity with different cultures as an indisputable reality in globally connected twenty-first-century societies. Gärdenfors's emphasis on teaching through patterns is in part a response to what he views as one of the major challenges of globalization—students' inability to make sense of and connect to other cultures.

Gärdenfors also develops a powerful argument for the use of instructional technologies to provide students with real-life simulation experiences, opportunities for visualization, and individual tutoring. He is skeptical of theories that place student exploration and independent discovery at the center of all learning. Instead he stresses that in order for students to most effectively learn to recognize patterns "that have taken scientists and professionals centuries to uncover," they must receive instruction and scaffolding from skilled and knowledgeable teachers. Gärdenfors advocates incorporating instructional technologies as a way to make patterns meaningful by anchoring them in concrete experiences for students. He closes the chapter with a reference to the ongoing debate about the appropriate role of advanced technologies in education. For Gärdenfors, this debate is a symptom of the need for increased research on student learning processes in order to further develop pedagogy based on the needs and learning styles of students in the global world. Gärdenfors's contribution highlights the value of advanced research on learning and understanding—especially new research that is becoming the cornerstone of scientific exploration in the age of new technologies and globalization.

New imaging technologies are rapidly changing our understanding of the human brain and its relationships to learning, emotions, and under-

standing. The connection between children's neurological makeup and their ability to learn has important implications for the structure of classrooms and for the development and implementation of pedagogy. How might research in the field of mind, brain, and education (MBE) contribute to educational innovations and provide new insights into the education of children in the globalized classroom? In their chapter, "Mind, Brain, and Education in the Era of Globalization," researchers Tami Katzir, Mary Helen Immordino-Yang, and Kurt W. Fischer discuss the historical development of the field and present two detailed case studies to demonstrate the value of MBE in illuminating children's learning and in identifying effective pedagogical strategies for the age of globalization.

An overview of MBE's growth and development sheds light on the interdisciplinary nature of the work that MBE researchers are doing to connect cognition, biology (especially neuroscience and genetics), culture, and educational practice. The authors claim that new interdisciplinary research is critical to overcoming what they identify as a key challenge in educating youth in the era of globalization: distinguishing aspects of learning that are universal from those that are unique to individual learners. Using data from two case studies—one involving reading acquisition and the other, a cross-cultural study of brain hemispherectomies in two adolescent boys—the authors conclude that "in bringing information about the neuropsychological organization of skills to bear on the design of learning environments, researchers and practitioners can improve education by understanding both the kinds of tasks presented to students and the various possible ways a learner can transform and interpret these tasks." This serves as an important call to action for scientists and educators to improve communication and increase collaborative efforts in order to put theories into practice and improve student learning in the globalized world.[28]

In their chapter, "Social Conduct, Neurobiology, and Education," renowned University of Southern California neuroscientists Hanna Damasio and Antonio Damasio explore the role of genetics and education in the patterning of social conduct. To test the prevailing assumption that both neurobiological processes and sociocultural factors are implicated in the development of appropriate social behaviors, the authors conduct an in-depth comparative study of the intellectual and emotional capacities in two groups of subjects with identical brain damage occurring at different points in life, adulthood versus childhood.

The Damasios' study includes a series of intelligence tests as well as psychological and neurological assessments used to gauge the subjects'

emotional and social responses in simulated real-life situations. It advances our understanding of how the age at which brain damage occurs may affect cognition and the brain systems needed to support social knowledge and skills. In addition, this chapter's valuable data reveal how "emotions play an indispensable role in the acquisition of social knowledge *and* in the ultimate practice to which the acquisition leads." The work of the Damasios in the field of mind, brain, and education demonstrates the power of brain science to influence both educational and social policy making. It also emphasizes the immense need for continued research to better understand the link between neurobiology and education, and to create classrooms that best serve all students' diverse learning needs and styles.

## PART TWO: LEARNING AND THE FUNCTIONS OF EDUCATION IN A CHANGING GLOBAL ECONOMY

In the second part of the book, we turn to a sample of basic research on the relationships between education in formal settings and rapidly changing economies and societies in the twenty-first century. In his chapter, "The Global Spread of Women's Schooling: Effects on Learning, Literacy, Health, and Children," Robert A. LeVine, an anthropologist at Harvard University, considers women's access to education in the developing world and examines the impact of women's education through a novel conceptual framework. His study of the effects of women's schooling in four countries—Mexico, Nepal, Zambia, and Venezuela—during the second half of the twentieth century focuses specifically on literacy and language acquisition and its consequences for girls and their families.

Building on the existing corpus of scholarship on the role of women's schooling for achieving gender equity and addressing health, population, and family problems (e.g., in UN declarations and UNICEF and World Bank publications), LeVine delves deep into the matter of just how school experience for girls and women actually affects socially desirable outcomes such as health, fertility, and child development. He develops a contextual and historical framework for understanding the impact of women's education in four continents. His analysis of the rapid expansion of schooling in the developing world, particularly during the last half of the twentieth century, and his thoughtful explanation of the familial and environmental circumstances that, in addition to education, may contribute to changes in health, reproduction, and child development pat-

terns are important contributions to our understanding of global educational challenges.

LeVine's exploration of literacy and language acquisition as distinct variables in assessing the impact of women's schooling augments the earlier work of demographers and sociologists in this field. In this study, LeVine develops data that reveal, contrary to the assumptions of many social scientists, real academic skill development and retention among female students, even in the face of seemingly low-quality schools and limited school attendance. LeVine identifies specific literacy and language skills, including familiarity with the "academic register" (language peculiar to schooling and bureaucratic environments), that have far-reaching benefits for women and their families. The study develops empirical evidence that the literacy and language skills women learn in school have an impact on their ability to understand public health messages and navigate complex bureaucratic institutions, specifically hospitals. LeVine thus demonstrates a potential pathway from school attendance to changes in health, family, and child outcomes in developing countries. His argument, bolstered by an impressive data set on the impact of literacy, supports expanding the number of primary and secondary schools and increasing access to education as means of equipping women in the developing world with some of the skills they and their families will need to survive in the increasingly complex, demanding world.

Variable school quality and, especially, unequal access to quality schooling are pervasive problems that disadvantage citizens in both Western and developing countries. Bernard Hugonnier, deputy director of education at the Organization for Economic Co-operation and Development (OECD), claims that the importance of human capital in the knowledge-based economies of the twenty-first century necessitates rapid and extensive reform of education systems worldwide. In his chapter, "Globalization and Education: Can the World Meet the Challenge?" he calls for significant improvements in education and training and provides a thorough comparative analysis of the current state of education worldwide. Furthermore, he explores where the global economy is headed and what nations and international stakeholders must do to compel sluggish school systems to match the pace of global economic, technological, and cultural change. Dr. Hugonnier's premise is that the process of globalization, characterized in part by the increasing replacement of physical labor by knowledge-based skills, has direct consequences for education. Local, national, and international leaders have a responsibility to act

accordingly. This chapter provides data on a variety of indicators such as lagging student performance in certain domains and the disastrous effects of persistent inequality in schooling. Hugonnier emphasizes the need for collaboration among institutions of higher learning in order to assist the global population in reaping the greatest benefits from globalization via education.

The OECD has led much of the research to determine what skills, training, and education people worldwide will require to survive and thrive in the knowledge-intensive economies of the twenty-first century. Hugonnier examines a number of OECD studies, including ones on countries leading the way in training citizens for "lifelong learning" and others on the ongoing disparities between native-born and immigrant student performance on standardized tests. These studies provide evidence of existing efforts to meet the challenges of education in a global world, and demonstrate the serious need for significantly more work. The author describes what he sees as the five major challenges of globalization for education: the need for higher-level skill development and opportunities for continuous learning; the demands of increased cultural interconnectedness; increasing social and income disparities; the responsibilities of global citizenship; and the impact of education in the developing world. He offers a sobering caveat about the dire consequences for all if countries fail to respond in a timely manner to the pressing educational demands of the twenty-first century: "Limited educational endowment and inequality in the world distribution of educational opportunities can only limit their [countries'] ability to reap the full benefits of globalization." Hugonnier ends on a hopeful note by providing government leaders, educators, and citizens with a series of thought-provoking questions to stimulate conversation and action regarding possible changes to educational practices and policies on an international level.

According to Sigmund Freud's wise maxim, love and work constitute a happy life. But the nature of work is rapidly changing under the new realities of globalization. Analyses of labor market trends and job growth sectors are critical for identifying the specific types of skills and knowledge people will need in order to compete in the global economies and societies of the twenty-first century. Considerable improvements will be required for schooling to meet the demands of global economies. Yet because formal education systems are so averse to change, an orchestrated campaign based on reliable data and conceptual rigor will be required to promote comprehensive reform in educational policy and pedagogy at all levels. The work of economists Frank Levy of MIT and Richard Murnane

of Harvard University plays a pivotal role in moving this discussion forward. In their chapter, "How Computerized Work and Globalization Shape Human Skill Demand," the authors explain the major shifts in the global marketplace and advocate more widespread and diverse training in higher-level skills. Through their investigation into the impact of globalization and the computerization of work on labor markets, they answer a number of basic questions about the role of computerized work in substituting human work and identify the educational implications of today's changing economic conditions.

Levy and Murnane begin with the claim that "globalization and computerized work currently substitute for workers in similar occupations—they reinforce each other—and this reinforcement occurs in both the United States and other advanced economies." The authors then discuss the different categories of work and the specific skills required to complete work-related tasks in various domains. By dissecting work into its discrete constituents, the authors are able to explain how certain jobs—so-called rules-based jobs, governed by deductive rules and easily recognizable patterns—are easily taken over by computers, or outsourced to workers in another country, or both. At the same time, Levy and Murnane rebuff the idea that computers will eventually replace human labor entirely; they describe uniquely human skills, intellectual and emotional capabilities that include the ability to perform "expert thinking" and to manage "complex communication" tasks and that will never be supplanted by computational technologies. The authors warn against the continuation of pedagogical practices that do not help students develop "expert thinking" and "complex communication" skills, and condemn the current overemphasis on standardized testing. Alarmed by "growing inequality as significant numbers of moderately skilled workers are displaced and must compete for lower-skill jobs," they endorse a far-reaching campaign to train all citizens to compete and succeed in the global economies of the new millennium.

Kai-ming Cheng of the University of Hong Kong builds on Levy and Murnane's analysis of labor market shifts and their implications for education by looking at the changing structure and organization of work through an anthropological lens. In his chapter, "The Postindustrial Workplace and Challenges to Education," Cheng describes the nature of work in global societies and explains how new working environments and management structures and different skill requirements for workers contradict much of the training and organizational theory of the past. He focuses on the large-scale shift from the large-factory business model

characterized by hierarchical management to smaller, more flexible work-places in which employees are required to work autonomously across multiple domains and to use high-level communication, problem-solving, and decision-making skills.

Cheng dedicates the second part of the chapter to identifying the main underlying assumptions that govern school structure and curriculum: labor market demands, specialization, and the importance of academic study. He effectively identifies the flaws of each assumption by pointing to data on new societal demands for postsecondary education, on how specialization causes an enormous mismatch between education and work, and on how the world of work now requires individuals to possess a new set of skills and capabilities learned both inside and outside the classroom. The author claims that "preparing young people for a definite occupation is not always a positive contribution to their future" and that "people's capacities have to go beyond occupational specificities." Emphasizing the need for "soft skill" development, Cheng points to the increasing relevance of communication and expert thinking and makes various explicit suggestions for school reform. His anthropological assessment of work and schooling adds to the growing body of research on the reforms needed for students to emerge from school equipped with the knowledge and diverse skills needed for social, academic, and professional success in the twenty-first century. Cheng concludes, "Changes in workplace structure will eventually result in fewer available *jobs*. At the same time, however, there will be almost limitless space for *freelancing and entrepreneurship.*"

## PART THREE: LEARNING, IMMIGRATION, AND INTEGRATION

Global demographics are shifting, and in many countries, native populations are decreasing while immigrant populations continue to grow apace. This is increasingly the case in the advanced postindustrial democracies of the Northern Hemisphere. These changes represent an important challenge and have implications not only for immigration controls but also for social, economic, and educational integration policies. Everyone, native and nonnative alike, must learn to adapt to the new, heterogeneous face that globalization is painting throughout the global cities of the world. Rita Süssmuth, former president of the German Bundestag (parliament), deploys various demographic projections and up-to-date data on migration trends to emphasize teaching all students the "intercultural

skills" they need to work, communicate, and interact successfully with the diverse people they are likely to come into contact with, either in person or digitally, in today's highly integrated, technology-dependent world. In Süssmuth's view, most educational institutions are failing to adequately prepare their students to navigate in new, heterogeneous, multicultural environments, and the content and delivery of school curricula are in desperate need of revision and modernization.

Rita Süssmuth is a seasoned and widely admired senior policy player in German and European politics. She frames the general disconnect between the new demographic reality on the ground in Europe and the timid, anemic policy interventions as a matter of political will. She explains: "Based mainly on immediate economic concerns and cultural fears, issues such as investment in education and integration policies often take a back seat in order to avoid risking political capital in the short run." She cites data from the OECD's PISA study, which identified a significant gap in the educational attainment of immigrant students in many OECD countries, to illustrate how a dysfunctional educational policy has profound consequences in everyday life. The author focuses much of the chapter on defining the "intercultural skills" that she believes are critical to student development in the twenty-first century. She concentrates on the cognitive, digital, social, and emotional skills needed in today's global economies and societies and offers concrete ways in which to integrate skill-building interventions into the classroom. Turning to the Tensta Gymnasium in Stockholm, Dr. Süssmuth argues that it can serve as a model example of how a school may undergo extensive structural, pedagogical, and philosophical changes in order to adjust to the shifting demands of a highly diverse global student population. She reflects on Tensta's experiment and its many successes in meeting the challenges of preparing all students to fulfill their roles as global citizens. She closes with an urgent call for more time, investment, and research on intercultural curricula, pedagogy, and practice in order to expedite the educational reforms needed for schooling to catch up with global economic, demographic, social, and political changes.

While much works remains to be done, the experience with large-scale migration to and within Europe over the last half century has of course led to experimentation with policies and practices aimed at facilitating the social transition and integration of immigrants to their new countries. Some of this work has focused on education. In his chapter, "Globalization and Education: Integration of Immigrant Youth," Maurice Crul of the Institute for Migration and Ethnic Studies at the University

of Amsterdam examines various European educational policies and initiatives designed with immigrant students in mind. Furthermore, he identifies practices that serve immigrant students as well as those that have failed and indeed may be derailing immigrant student achievement.

The successful integration of immigrants can never be a matter of simply implementing top-down policies. Hence Dr. Crul explores ways in which immigrants are using their own knowledge and expertise to develop networks and resources aimed to help ease their children's transition and meet the social, cultural, and educational challenges they might experience in the host society. This chapter compiles data about the work being done in Europe, both inside and outside schools, to respond to major changes in the demographic makeup of many cities and towns; changes requiring resources and strategies to assist immigrant youth's mastery of new languages, cultures, and educational and social environments.

In his essay, Crul develops the argument that the skills, knowledge, and "human capital" that immigrant students and their parents bring with them from their country of origin have profound implications for their successful transition to their adoptive country. He conducts an in-depth comparison of the experiences and academic outcomes of second-generation Turkish youth above age fifteen in Germany, the Netherlands, France, Austria, and Belgium and isolates the factors that are contributing to or hindering their educational advancement. Beyond the human capital the immigrants bring with them, Crul specifically argues that the following variables are important factors in the transition of their youth: the age at which schooling begins (which is different in all the countries); the number of contact hours between pupils and teachers; the school selection mechanism; the age at which students are put into an academic versus a career track; the stigma attached to vocational programs; and the availability of apprenticeship programs. Each of these shapes the likelihood of an immigrant student's success or failure. Disparities in the countries' educational structures and policies related to these factors account for varying student outcomes. The author also describes a number of community-based initiatives aimed at nurturing immigrant student engagement in school and achievement. He argues that "the capital (knowledge and experience) of successful students with a migrant background should be put to use more effectively." Concluding with a reflection on the Tensta Gymnasium in Stockholm, Crul points to the increase in student-teacher contact, rather than improved technology, structure, or pedagogy (emphasized by other scholars in this book), as the defin-

ing element of change that may have helped turn a failing school into a model success story for immigrant students and families.

Immigration nearly always generates ambivalence in a society: immigrants are seen as needed for labor, but their presence raises concern about their cultural adaptation and the changes large-scale immigration causes in host societies. Are immigrants learning the new language, or are they linguistically balkanized? Are they giving up cultural practices that are incompatible with the new societies—such as female genital mutilation, arranged marriages, and inheritance by primogeniture? Controversy over appropriate and equitable responses to the social, cultural, linguistic, economic, and educational impact of large-scale immigration is not a new phenomenon. As Marie McAndrew of the University of Montreal argues in the chapter "The Education of Immigrant Students in a Globalized World: Policy Debates in a Comparative Perspective," disputes over how to best educate immigrant youngsters have emerged repeatedly during periods of globalization and large-scale immigration over the past century. Professor McAndrew focuses on three major public policy debates regarding the education of immigrant students today. She provides historical context for each of them in order to "ascertain to what extent the challenges we face today are specific to the present or can be enlightened by the lessons of past experiences, whether positive or negative." She examines three issues: the role of common schooling versus ethnocultural institutions in the integration of newcomers; the place of majority and immigrant minority languages in the curriculum; and the extent to which public schools should adapt their norms and regulations to religious and cultural diversity. She concludes that the last area is the most controversial and, in many ways, most challenging for liberal democracies increasingly confronting unsettling cultural clashes for the first time (see also Wikan, this volume).

An overview of the ethnospecific institutions of the nineteenth and early twentieth century and of today leads McAndrew to conclude that the existence of separate schools for immigrant minorities has in general tended to benefit immigrant students, through the propagation of cultural values and language (especially in earlier historical phases of large-scale migration) and, in more recent times, through the provision of academic classes at a higher level than provided by the low-performing public schools to which immigrant students are otherwise often relegated. She identifies a corpus of scholarly work demonstrating the positive impact of interventions nurturing the development of a strong self-identity as an effective road to integration. In response to ongoing discussions about the

value of teaching immigrant languages in schools, McAndrew presents a host of policy options for consideration. She emphasizes the importance of keeping the conversation focused on the needs of immigrant students, but mentions the possibility of "collateral benefits" of learning a new language for native students as well. McAndrew does not attempt to provide guidelines for how to resolve the contentious debates surrounding cultural and religious diversity in European societies. Instead, she offers scholars, policy makers, and practitioners a valuable overview of five practices on a continuum and carefully reflects on those policy options that could be most damaging to immigrant children and the societies in which they live. McAndrew closes the chapter with an important caveat about the treatment of immigrant students: "They can live in two different worlds as long as they are not forced to choose one over the other or made to feel that some cultural or religious characteristics are linked to socially devalued individuals." It is critical that all members of these changing societies and, particularly, public institutions that work with immigrants understand the fragile balance that immigrant students strive to achieve, and support their transition to the new country.

The social, cultural, and economic equilibrium that liberal European democracies worked hard to achieve in the aftermath of World War II and the Cold War has begun to show signs of deep destabilization. Immigration is at the core of this new dynamic. There is a new clamor, originating in both immigrant and native communities alike, demanding new responses to the obvious failures of the status quo. There is a huge premium on creating the conditions for the coexistence of immigrants and native citizens and their effective adaptation to Europe's new linguistic, cultural, and demographic realities. Eugeen Roosens, Belgian anthropologist of immigration at the Catholic University of Leuven, examines the question of first language and culture in Flanders, Belgium, and highlights one of a series of pivotal issues regarding the interplay between effective integration of immigrant youth and respect for immigrant languages and cultures. In his chapter, "First Language and Culture Learning in Light of Globalization: Muslims in Flanders, Belgium," Roosens describes the current state of what he terms "intercultural education" in Belgium and distinguishes between the reality of current efforts and the ideal content and pedagogy advocated by the immigrant community via the Flanders Forum of Ethno-Cultural Minorities. His careful dissection of the flaws of current work to assist immigrant students' identity formation through language and culture classes has broader implications for all efforts within this arena. He offers important recommendations for how to

reach the fine balance of teaching students both native and second language and culture.

Dr. Roosens examines the current xenophobic attitudes in European politics and media—a dynamic significantly shaping policy debates on immigration and integration while also obscuring important issues such as the most appropriate options for immigrant education. He describes the fall from grace of such concepts as "multiculturalism" and paints a worrisome picture of a climate quite hostile to the reforms and innovation urgently needed in immigrant education. Pointing to polarization that has led to a lack of cultural critique in Flanders, something he attributes to the persistence of a liberal fear of offending any culture, Roosens concludes that a general failure to seriously discuss cultural identity and rights, particularly in a time of interethnic tension, is doing considerably more harm than good. The author's discussion of the value of cultural critique has particular significance in light of his recommendations for first-language and culture courses, given the Flemish government's multiple missteps in this area. He criticizes the use of teachers from immigrant students' countries of origin, who are often ill prepared, have limited knowledge of the Dutch language or of Flemish traditions, and typically lack familiarity with the students' local social realities in Northern Europe. Furthermore, he blames federal and regional policy makers who "continue to leave the youngsters in the hands of the imported traditional sectors as far as knowledge of their culture, language, and history of their religion is concerned, . . . [with] no rational, critical counterweight whatsoever." For Roosens, developing a means for the integration of immigrants that helps them to both preserve and critique cultural traditions is no longer a choice for countries whose immigrant populations continue to grow. He presents ideas for moving this agenda forward and warns of the potential consequences if politicians and other members of society continue to turn away from the cultural realities in which they live.

Unni Wikan of the University of Oslo takes Roosens's warnings one step further in her chapter, "Rethinking Honor in Regard to Human Rights: An Educational Imperative in Troubled Times." What is at stake if we fail to integrate immigrant youngsters? In her contribution, Dr. Wikan describes the deadly results of the failure to seriously engage, critique, and outlaw cultural practices that violate an individual's human rights. Wikan, an eminent Norwegian anthropologist with extensive fieldwork experience in the Middle East, Asia, and Europe, examines the "honor killing" of Fadime Sahindal as a cultural paradigm of a death foretold, illustrating the deep ideological conflicts that many liberal European

democracies have been forced to contend with—and that they have increasing difficulties in managing as a result of growing immigrant populations with foreign cultural practices that are unsettling to local sensibilities. Wikan, in an ethnographic *j'accuse,* decries the Scandinavian governments' prolonged passivity and lack of response to repeated violations of individual rights in the form of forced arranged marriages and even honor killings, and uses Fadime's own testimony prior to her death to highlight the enormous failure to integrate immigrants into European society. In this chapter, the author claims that a fear of cultural critique, lack of effective legislation in response to unfamiliar cultural practices, and anemic efforts to facilitate immigrant integration and adaptation are the primary causes of an estimated twenty-five honor-killing deaths over the past twenty years.

Wikan's extensive experience as a social anthropologist working with Muslims in multiple settings in many countries frames her deep understanding of an "honor code" as the basis of the right of the collective over the individual in many societies in Eastern Europe, the Middle East, North Africa, and South Asia. She thoroughly describes the cultural models and social practices at the heart of the honor code and explains how immigration to modern liberal democracies such as Sweden, where Fadime lived for a long time before being murdered by family members, does not mean that these deep cultural formations are automatically or easily shed. In fact, globalization in the form of inexpensive, widely available, and instantaneous Internet communication technologies has contributed to the perpetuation of clan hierarchies, transnational decision making, and enforcement of certain traditions, including honor killings and forced marriages.

Wikan uses Fadime's case, in part because it is a particularly poignant example for illustrating the complexities of current European struggles with cultural contact and transculturation—and lack thereof. Indeed, the case suggests that even in seemingly integrated communities the gulf marking cultural divides can be enormous. Fadime's cultural tragedy suggests that the continuation of tribal practices such as honor killings does not simply occur in immigrant families that appear to be cut off from "mainstream" society and economically marginalized. Fadime's family lived in an integrated city, not an immigrant enclave, and her father had worked for a small Swedish company with Swedish colleagues for almost twenty years. The case demonstrates that socioeconomic integration does not automatically translate into cultural integration. Fadime ominously identified

this very issue early on and emphasized the need for policies and practices aimed at improving outreach and integration of immigrants in order to bridge a deep cultural divide. For Wikan, at the root of the problem is that cultural practices that value the collective good over individual freedom and liberty have been left unopposed by European governments for too long. Although certain governments have begun legislating to protect individual rights and to respond aggressively to illegal activities, change is often slowed by fear of cultural insensitivity. Wikan offers a formula for overcoming the apparent obstacles to outlawing certain traditional cultural practices: "By delinking honor from violence and reconnecting it with human rights, we can transcend barriers between cultures and form an agenda for our time." In shifting the discussion from collective rights to human rights, Wikan hopes to galvanize individuals and policy makers to take action to prevent further loss of individual life and liberty. All stakeholders working on immigrant and refugee education in the advanced postindustrial democracies of the West should read her chapter carefully.

This book contributes to the nascent body of scholarly research on globalization and education. Its broad scope paints for readers the breadth and depth of globalization's challenge to education and its impact on nations, communities, and individuals. All global citizens are now implicated in the struggle to create better-integrated, more egalitarian and just societies. Furthermore, each chapter identifies research questions vital to advancing understanding of the implications of globalization. The volume calls on scholars across academic disciplines to take on these issues at a most critical time in history.

*Learning in the Global Era* is the result of a long-standing intellectual debate and of multiple exchanges that originated at the FICGL in March 2005 and continue in various forms today. This project has brought together scholars, researchers, educators, and policy makers from around the world to examine how globalization is changing the educational landscape and discuss what schools and allied institutions can and must do to prepare youth to live in the global era. The chapters that constitute this volume were originally presented as lectures or presentations at the conference, and were chosen for inclusion for their particular relevance in advancing the conference's mission to clarify the educational challenges and opportunities presented by globalization and to generate a long-term international research agenda that directly addresses these concerns.

The Tensta Gymnasium served as a learning laboratory where conference participants came to reflect in situ and in conversations with students, teachers, and administrators about one school's struggles to redefine education for all in light of new global realities. That experience left a powerful impression on all participants; indeed, many of the contributing authors cite the Tensta Gymnasium in their work, each commenting from her or his own scholarly vantage point and each reflecting on a different aspect of the school's design, focus, pedagogy, or philosophy. Tensta is a work in progress that already stands as a beacon of hope and possibility for effectively educating all students and especially facilitating the integration of immigrant and refugee-origin youth in their adoptive country; however, the stark contrast between this school and the school environment and forms of instruction the majority of students, particularly refugees and immigrants, currently receive the world over reminds us of just how much work is ahead.

Reforming education to be more in tune with global reality will require focused energy, commitment, creativity, political will, and resources on local, national, and international levels. The political class, policy makers, opinion shapers, business leaders, teachers, parents, and concerned citizens alike must be inspired and galvanized to take on the arduous work of dismantling an increasingly anachronistic system and creating educational systems in sync with the realities of the global era. The Tensta experience described here suggests that there is no educational reform on the cheap: educating poor, immigrant, and refugee-origin youth for the global era cannot be done without the political consensus to support expensive interventions such as longer school days, significant technological investment, and intensive teacher training and mentoring. This is the Achilles' heel of the No Child Left Behind Act in the United States, a largely unfunded federal mandate. However, our children cannot wait for the political will and much needed funds to catch up with the current demands of the global society. Schools can and must begin to take the necessary steps to provide all students with the learning and skill-building opportunities they need to survive and thrive in the twenty-first century.

The challenges to implementing a resource-intensive model such as Tensta are numerous, and the unique commitment on the part of Sweden's political, business, and education leadership to provide additional resources to schools serving lower-income and high-need student populations is not likely to be duplicated in other countries, at least in the short term. There are, however, a number of core elements common among

many promising school models—some of which have been discussed in depth by the contributors to this volume—that are more easily replicated by school staff and require less up-front financial investment. Specifically, restructuring curriculum and pedagogy to place student engagement at the very center of learning offers one potentially effective remedy to the overwhelming issue of student boredom that pervades classrooms across the globe. Lessons that are grounded in events and issues relevant to students' lives and built on key concepts and pattern recognition, as suggested by Boix Mansilla and Gardner and by Gärdenfors in this volume, signify one concrete change educators can implement collaboratively across the school. Ongoing and nearly instantaneous feedback has proven to be another successful and relatively inexpensive technique that teachers can use to promote and maintain students' engagement in their learning and in their progress. Using a host of evaluation and communication methods, teachers, parents, and students can partner in tracking a student's development and collaborate in devising strategies to support continued academic growth. Finally, a clear narrative of the school's basic mission and a shared sense of purpose among students and school personnel have been cited as major factors likely to generate successful results with immigrant, refugee, and other minority youth. These practices represent just some of the countless adjustments schools can begin to make in their journey to providing a twenty-first-century education.

Research on the dynamic relationship between globalization and education and its consequences for society at large is critical to fostering public debate and stimulating work grounded in empirical evidence, conceptual clarity, and an empathic vision of a more just, equitable, and humane global world. This book represents, we hope, a step toward beginning this journey by identifying important issues and laying the groundwork for the development of a reform agenda. All stakeholders must understand their roles and responsibilities in effecting fundamental changes in education worldwide and must embrace the opportunities this monumental task offers.