When it comes to education, to paraphrase computer scientist Alan Kay, the best way to prepare students for the future is to equip them to invent it. The educational paradox of the beginning of the 21st century lies in the disconnect between the superb institutional capacity of schools and their underperformance in preparing students to invent a future that appropriately addresses the global challenges and opportunities shared with their fellow world citizens. Whether these are the challenges of collectively improving the living conditions of the global poor and destitute, of achieving sustainable forms of human environmental interaction, of finding fair and sustainable forms of global trade, of addressing health epidemics, or of creating the conditions for lasting peace and security few schools around the world today are equipping students with the skills and habits of mind necessary to collaborate with others, across national boundaries, in inventing and implementing lasting solutions to these challenges. These are, without a doubt, complex issues and their resolution can involve multiple options, some controversial. Preparing students to deal with such complexity and controversies is at the heart of global education, absent today in most schools around the world.

This is paradoxical because we live at a time of extraordinary educational institutional capacity. The vast majority of the world’s children today have the opportunity to begin an education and to complete several years in these relatively recent inventions we call schools. For much of the world, that is for the developing world, this transformation from societies where most people were unschooled to effective mass education was achieved over the last century, and accelerated since the approval of the Universal Declaration of Human Rights, with its focus on education as a fundamental human right, and the creation of the United Nations more than sixty years ago.

When I describe schools as effective I refer to the fact that all nations have created a legal framework and a set of institutions that ensure that most children begin school and spend in them several years in the early stages of their lives. The extraordinary organizational capacity refers to this goal of including the intended beneficiaries of education. With regard to the goal of teaching students what schools intend to teach them there is much greater heterogeneity in the effectiveness of schools within nations and among nations. But the real paradox comes from focusing on the effectiveness of schools on yet a third goal, the goal of preparing students for the social and economic contexts in which they will have to invent
their lives. With regard to this goal of relevance, particularly relevance to live in a world ever more integrated, most schools fail. Addressing this paradox requires repurposing mass education.

Making global education, whose focus is the development of global competency, a serious priority for schools around the world necessitates a narrative that describes this purpose, conceptualizes it and suggests how to achieve it, so that different social actors can collaborate in the improvement of the global efficacy of schools. This chapter offers such conceptualization.

1. The Tri-Dimensional Nature of Global Competency.

I define Global Competency as the knowledge and skills that help people understand the flat world in which they live, the skills to integrate across disciplinary domains to comprehend global affairs and events and to create possibilities to address them. Global competencies are also the attitudinal and ethical dispositions that make it possible to interact peacefully, respectfully and productively with fellow human beings from diverse geographies.

This definition of global competency includes three interdependent dimensions:

1. A positive disposition towards cultural difference and a framework of global values to engage difference. This requires a sense of identity and self-esteem but also empathy towards others with different identities. An interest and understanding of different civilizational streams and the ability to see those differences as opportunities for constructive, respectful and peaceful transactions among people. This ethical dimension of global competency includes also a commitment to basic equality and rights of all persons and a disposition to act to uphold those rights (Reimers, 2006).

2. An ability to speak, understand and think in languages in addition to the dominant language in the country in which people are born. As Joel Cohen explains in a chapter in this volume, foreign language skills are analogous to stereoscopic vision to the global mind (the skill dimension).

3. Deep knowledge and understanding of world history, geography, the global dimensions of topics such as health, climate and economics and of the process of globalization itself (the disciplinary and interdisciplinary dimension) and a capacity to think critically and creatively about the complexity of current global challenges.

We could call these dimensions the three A’s of Globalization: the Affective dimension, the Action dimension and the Academic dimension. These dimensions for a ‘teaching space’ defined by three orthogonal vectors: a vector focused on the development of character, affect and values; a vector focused on skills and the development of the motivation to act
and the competency to act; and a vector focused in the development of cognition, academic knowledge and the ability to draw on distinct knowledge domains to understand global issues. Global education is multidimensional suggesting that quality global education must attend to each of these dimensions. Some contemporary debates about education quality are limited because they focus in one or the other of these vectors. Excellence in this domain, and perhaps in many others, is about teaching a specialized body of knowledge about global affairs (academic) and the ability to use that knowledge to solve practical problems (action), but is also about the development of character, of the virtues that would lead people to use their knowledge for ethical global purposes (affect).

In the rest of this chapter I explain why this tri-dimensional global competency is a necessity for all people and discuss some of the challenges and opportunities to making progress in the near future.

2. Why Global Competency for All?

Globalization has led to an increase in the frequency and type of interactions among people of different cultural origins. In some countries this results from immigration. In most it results also from the increasing use of telecommunication technologies and from the transformed production and trade of goods and services.

Immigration, trade, and communications present unprecedented opportunities and challenges to most people. These enhanced interactions among people with different worldviews and cultural values affect social expectations and notions of identity. Individuals' or groups' responses to the changes around them depend in part on how they are prepared to understand cultural differences, and to think about globalization and its attendant processes.

Unless schools effectively develop tolerance, cosmopolitanism, deep knowledge of global affairs, and a commitment to peace, the likelihood of the civilizational clashes predicted by Samuel Huntington will increase (Huntington, 1993, p. 28).

We live in a rapidly shifting era in which economic opportunities and challenges abound. The increase in the intensity and frequency of interactions among people in different geographies that characterizes globalization impacts job prospects, health, physical security, public policy, communications, investment opportunities, immigration and community relations. In short globalization is deeply transforming the context of the lives of many people around the world. Those who are educated to understand those transformations and how to turn them into sources of comparative advantage are likely to benefit from globalization; but those who are not will face real and growing challenges.
The preparation to develop these understandings, knowledge and skills must begin early in order to develop high levels of competence as well as help youth recognize the relevance of their education to the world in which they live.

While the economic advantages that accrue to global competency have received more attention than the civic advantages, global competency is helpful not only from an economic standpoint but as a cornerstone of democratic leadership and citizenship. Because the boundaries between international and domestic problems have become increasingly porous the demands of government and citizenship now require knowledge of international topics. Elected representatives and voters will be able to make informed decisions about issues such as trade, health epidemics, environmental conservation, energy use, immigration, and especially global stability only if educated to understand the global determinants and consequences of those issues and decisions.

Global competencies have been rewarded in years past, and because of this some families, schools and universities have for many years helped a select group of students acquire the ability to speak foreign languages, an interest in global affairs and deep knowledge of global topics. What is changing as a result of globalization is that these skills are necessary for the majority of the world’s population, not just for a few.

Therefore, global competency should now be a purpose of mass education, not just of elite education.

In the United States, for example, since the end of World War Two political elites agreed on the importance of publicly funding programs in universities to enhance the development of a cadre of experts in foreign languages and foreign area studies that would serve the perceived needs of national security, and more recently, of business competitive advantage. A recent evaluation of those programs, undertaken by the National Academy of Sciences at the request of the US Congress, concludes that they must be redesigned to serve a broader segment of the college population, not just a few specialists (National Research Council, 2007).

Because the demand for international competencies has extended to other occupations beyond the ‘area studies specialist’ and has broadened to become part of the basic competencies necessary for citizenship and work in the 21st century, two needs arise: 1) the need to incorporate the opportunities to develop these competencies in the graduate curriculum of other fields of studies beyond area studies, for example in professional studies of education, social work, public health, business or law; and 2) the need to generalize opportunities to develop of the foundations of international competence in the undergraduate curriculum and in K-12 education.
The broad need for global competency is increasingly recognized by students and by parents. A survey of voters by the Partnership for 21st Century Skills, an education advocacy coalition in the United States, found that 2 in 5 voters consider global awareness a very important skill, while only 6% of them thought schools do an adequate job developing them (Partnership for 21st Century Skills, 2007, p. 3).

Support is also growing in the United States for learning a second language. According to a survey conducted by the American Council on Education in 2000 85% of the public thought that knowing a second language was important, compared with 65% in 1965 and 77% of those surveyed agreed that foreign language instruction should be mandatory in high school (Hayward and Siaya, 2001, p. 22). In 2002, 93% of those surveyed said that they believed knowledge about international issues would be important to the careers of their children (American Council on Education, 2002, p. 3.) In a youth survey conducted in 2004 76% of students said they would like to know more about the world (Horatio Alger Association of Distinguished Americans, Inc., 2003. p. 57-58).

In the UK, a youth survey conducted for the Department for International Development in 2004 showed that 79% wanted to know more about what is happening in developing countries, 54% thought they should learn about these issues in school, 65% were concerned or very concerned about poverty in developing countries (Oxfam 2006,p.4).

3. **How can global competency be developed?**

The multidimensional nature of global competency means that providing opportunities to develop it must also be a multifaceted process. Some subjects can help to develop that knowledge: world history, geography, and foreign languages. But global competency can also be developed in learning to read by reading texts that reflect cultural diversity, and in learning science, by conducting projects that help illuminate the transnational nature of the scientific enterprise. Central to developing global skills is to foster student engagement and interest in world affairs. A good factual foundation, and a positive disposition to continue learning throughout life about global affairs can serve students better than many facts taught in boring ways or than a curriculum that caricatures world history or social studies.

While the development of each of the three dimensions of global competency may facilitate the development of the others (for example, learning to read in a foreign language provides access to texts written in that language that can support deep disciplinary knowledge about particular cultures and societies and this may reinforce a positive disposition towards global affairs), these dimensions represent sufficiently distinct domains that they can be treated, for purposes of policy and programming, as independent.

The **first dimension** includes attitudes, values and skills that reflect an openness, interest and positive disposition to the variation of human cultural expression reflected internationally.
and a global value framework. In their most basic forms they comprise tolerance towards
cultural differences. More advanced are the skills to recognize and negotiate differences in
cross-cultural contexts, the cultural flexibility and adaptability necessary to develop empathy,
trust and to have effective inter-personal interactions in diverse cultural contexts and a
commitment to extending the Golden Rule to the treatment of 'others' from different
civilizational streams or cultural backgrounds.

These values and attitudes can be developed in a number of ways, reading books that reflect
cosmopolitan views and values, interacting with culturally diverse groups of students,
engaging in school to school international projects, accessing content about comparative
topics such as comparative literature or world history or geography, studying artistic
creations from different cultures, discussing films focusing on human rights issues,
participating in global groups such as the World Scouts Movement, in Global Youth
Movements or in International Sports Competitions.

Cultural awareness can be developed at all levels of the educational ladder and should
probably be developed starting at the early ages, when children's basic values are shaped,
and should engage multiple performance domains and ways of knowing, including
deliberation, formal study, simulations, project based learning and experiential education.
The opportunities to develop these competencies can effectively be integrated across
existing subjects in the curriculum. They will not necessarily require separate slots in the
timetable and as such may be easier to integrate in the existing curriculum frameworks in
many countries.

What resources are necessary to support the development of this first set of global
competencies? Instructional materials in a variety of media, professional development for
teachers and administrators and incentives in the accountability systems (standards and
tests) to devote some instructional time to these issues. Experiential learning can be very
effective to develop these competencies, providing students the opportunity to interact with
students from a different cultural background, either in culturally diverse schools, through
study-abroad or through student collaborations across schools with culturally diverse student
populations using technology. For example, iEarn is a network of K-12 schools that supports
school-to-school collaborative projects (www.iearn.org/projects).

Through this network teachers are linked with peers in other parts of the world to
 colaborate either joining structured projects or designing their own. Some of the projects
include a project on the study of the Holocaust and genocide, a project to exchange folk
tales, a project that supports collaboration of urban youth in the publication of a magazine to
express differences and similarities of people throughout the world, an environmental
project, a project on first nations.
The second **dimension** of global competency is foreign language skills. These allow communication through varied forms of expression of language with individuals and groups who communicate in different languages.

The resources to develop these competencies are skilled teachers of foreign languages, and adequate instructional materials, as well as places in the curriculum to devote to foreign language instruction. Study abroad can help develop foreign language skills. Foreign language instruction can also be supported with programs in after school and during the summer, perhaps involving heritage speakers in the communities surrounding each school. Technology is an increasingly important resource to support foreign language instruction.

The **third dimension** covers disciplinary knowledge in comparative fields: comparative history, anthropology, political science, economics and trade, literature, world history and the ability to integrate across disciplines to think about and solve questions about aspects of the process of globalization such as the nature of global trade treaties, how to balance commitment to human rights with commitment to global trade when the latter involves countries where human rights are violated, or how to balance commitment to global institutions with the desire to achieve national foreign policy objectives in a reasonable timeframe.

These competencies can also be developed at all levels of the educational ladder, although they should probably be emphasized starting in the middle school curriculum, and deepen in high school and at the college level. Examples of this kind of skill would be deep knowledge of world history or geography, cultural history, or comparative literature, knowledge of international trade and development economics. There are also global topics which require drawing on different disciplinary fields. An educated person in the 21st century needs to be conversant with such topics and therefore needs the education to comprehend them. One example would be the population paradox. At its core the population paradox is simply the expression of demographic forces: the increase in health conditions worldwide, reduced birth rates in developed nations and higher birth rates in developing nations, are changing the demographic world balance. The result is an aging, and declining, population in developed countries and a growing population in developing countries. These demographic trends have implications for global patterns of trade and consumption, for energy and resource use, environmental impact and implications for international relations. Understanding the sources of these demographic trends and of the options to deal with them requires some knowledge of cultural norms in different societies, some knowledge of disparities in resource distribution, some knowledge of development economics and some knowledge of comparative politics.

The resources to develop these kinds of competencies are adequate textbooks, supplementary instructional resources – reference books and video taped materials and current dossiers and reports on current affairs, which can be very fluid and need up to date
knowledge—, supporting materials for teachers and professional development for teachers as well as places in the curriculum and in the accountability structure that induce attention to these topics. These competencies can be developed both integrating new content and activities within existing curriculum frameworks as well as in new courses. 1 NOVA: World in the Balance: The Population Paradox. PBS, 2003. Negotiating the introduction of new curriculum objectives or the creation of new courses will, in most cases, be significantly more difficult.

These competencies can be developed in the formal curriculum of instruction, but also in afterschool projects, in peer-based projects or in summer programs. For example, Netaid (http://www.netaid.org/), is an organization that provides high school students who want to lead projects to educate their peers about global poverty with profesional development and resources to develop such projects. In part these competencies can also be developed in study abroad and exchange programs and in join research projects where students collaborate, using technology, across countries. The Global Classroom Project, of the US United Nations Association (http://www.unausa.org) helps students in inner city schools learn about the multiple dimensions of different cross-national negotiations, and to develop the capacity to take perspective as they work on assignments where they view these negotiations from the point of view of different nations and groups.

Students need authentic experiences that engage them in learning about the world. What is engaging and motivating no doubt differs at various levels of education. The second grader can be engaged by some well written stories about children growing up in different parts of the world, by good films to support that instruction and by visits and conversations with college or graduate students from different parts of the world. The middle school child may be more engaged by research projects that allow them to explore questions that involve a comparative dimension that interest them, or by electronic exchanges with classmates in distant parts of the world in a sister school as they work on common projects. The high school student might be more engaged by subject matter in world history and geography that develops expertise to interpret current affairs, by conversations via video-conference with high school peers in distant lands, by study tours and by interaction with exchange students or by study abroad opportunities, and by seminars on topical global issues or area studies offered at the college level. Rich library collections of texts and audiovisual material, as well as adequate selections of internet resources are fundamental to develop student independence and engagement in taking responsibility for their own learning in this field.

The mix of these three types of competencies and the level at which they should be developed will vary in different professions, and also at the graduate, undergraduate and K-12 levels. Schools can develop, in partnership with other institutions such as Universities, Museums, Public Libraries, Publishing Companies and the Media, knowledge of other countries and cultures and about the processes of interdependency that link countries together at present. Schools can shape engagement in learning about global affairs.
throughout life, dispositions to value cultural differences, and the ability to draw on understanding of differences as a source to inform a framework of global values that includes compassion and caring, concern for others, respect and reciprocity, commitment to universal human rights and international covenants, including the expansion of human freedoms and capabilities, recognition of the basic equality of all people, and commitment to protecting the environment and of addressing global challenges collaboratively. Knowledge, engagement and values are the cognitive and attitudinal domains that global education should target.

4. Global Citizenship Education and Human Rights Education

The development of global values (the first, ethical, dimension of global competency) can be achieved drawing on the well established knowledge base in human rights education, teaching students not just knowledge of the rights and their history, but to appreciate and value these rights, to discern how they are upheld in the various communities of which students are a part, and to act towards the work in progress which is the achievement of these rights. Teaching to understand the importance of human rights and to act on this understanding is the cornerstone of global civility and of peace.

As the first sentence of the Universal Declaration of Human Rights states, respect for human rights and human dignity “is the foundation of freedom, justice and peace in the world”. Human Rights education provides a framework to examine the multiple ways in which intolerance violates human rights and to recognize and face extreme forms of intolerance and human rights violations such as sexism, racism, ethnocentrism, islamophobia, anti-semitism, aggressive nationalism, fascism, xenophobia, imperialism, exploitation, religious fanaticism and political repression (Reardon, 1997).

To educate for global civility it is imperative to use a common framework that informs the enterprise. This notion has been well developed by philosopher Sissela Bok in her book Common Values (1995). Bok explains that common values are essential to the survival of every society and that they are recognizable across societies. She further explains that these values are essential to human coexistence at all levels of interaction, from personal, to national and international relations. These common values are necessary to support cross-cultural dialogue and to address military, environmental, and other common challenges of humanity (Bok, 1995, p. 13).

The best approximation we have at present to this common framework of values is the Universal Declaration of Human Rights. Those who drafted the declaration struggled mightily with the challenges of drawing from different cultural and philosophical traditions. Though it may be possible to see the Declaration as a work in progress, in the sense that additional rights could be defined or operationalized, the Declaration is a starting point. The work of schools globally could be aligned to teach all children to honor and uphold these rights (not
just to know them), and to appreciate that others have the same rights. This would be a sufficient framework for much greater global civility than many schools promote at present.

Beyond direct instruction, the context of education is a fundamental component of global citizenship education. This context includes the opportunities students have to get to know and collaborate with others of diverse cultural, racial, and socioeconomic backgrounds; the climate in the school surrounding relationships among school staff and students as well as among school staff and parents and other members of the community; and the social norms that govern those interactions. These multiple opportunities to develop citizenship competencies are embedded in a community and larger cultural and social context that influences how students interpret what they experience in school and the choices they make about the roles they want to play outside the school. Students have to live their human rights, their schools have to provide authentic experiences in the practice of tolerance. Students need to experience in schools respect for human dignity, equal rights, appreciation of difference and tolerance. In addition to helping develop knowledge about human rights it is necessary that students develop the intra-personal and interpersonal competences to resolve conflicts peacefully, to confront violence.

More than direct instruction about human rights and respectful and tolerant education are needed. It is important to gain knowledge and the capacity to act in ways that engage the students’ moral reasoning skills and in ways that motivate them to act and to assume personal responsibility for their actions in the global realm. Opportunities to help students to develop and practice skills in real-life settings and to connect abstract knowledge to action are potentially important. Global service learning projects are examples of activities which can bridge the acquisition of knowledge with a disposition to assume personal responsibility for community needs.

5. The Challenges and the Opportunities to Global Education

If educating for Global Competence is desirable, and if we know how to do at least some of it in schools, why then isn’t it happening on a massive scale around the world? The problem is a lack of policy priority on this goal, of insufficient development of a knowledge base to support effective global education, and of limited capacities among teachers to engage their students seriously in the development of deep global competency. These are the three critical challenges that must be overcome to effectively repurpose public schools for mass global education. These challenges define then the opportunities: 1) include the development of Global Competency on the education policy agenda; 2) develop a solid knowledge base about what works well, with what effects and at what costs, and 3) provide opportunities for teacher preparation and high quality instructional materials. I will devote most of the rest of the chapter to the policy challenge, and make a brief reference to the opportunities to advance a research agenda and the development of instructional materials and opportunities for teacher professional development.
5.1. Getting Global Education on the Policy Agenda In the fierce competition to define the purposes of schools, few of the most active national and local stakeholders have incentives to focus on global education. While the idea that international institutions should be charged with promoting global civility is not new (UNESCO was created after World War II in part so that the seeds of peace could be planted in the minds of people), most advances of UNESCO and other development organizations have not been in this area. The Millennium Development Goals, which are meant to provide guidance and focus to the development community and to nations, are silent about the purposes of education.

Schools have been guided at different times by different purposes, from building nations and national and political identities, to helping the poor; from improving national competitiveness to assimilating immigrants; from educating citizens to educating workers. The proposition that schools should aim to educate global citizens competes with alternative purposes. While many nations at the end of World War II could see the necessity of planting the seeds of peace in children’s minds, this purpose has been crowded out over the last fifty years. The dominant competing purposes at present are: educating for economic competitiveness, educating for the formation of national identity, and educating to address particular interests of local communities. The justification of education as an economic investment has become so widespread that few notice that this idea is relatively recent. This idea took particular force with the development of the concept of Human Capital in the 1950s, and was disseminated by international development institutions. With the increasing globalization of the world economy many groups, particularly leaders of business firms, have reiterated the rationale that schools should make young people more competitive job-seekers in the world economy. This desire to compete economically was the principal theme of the report 'A Nation at Risk' which defined the basic architecture of the reforms of the last two decades in the United States. Little in the argument that schools should make people better workers would lead to the development of skills for global civility. Economic competitiveness is largely about acquiring technical skills to improve one’s region or nation’s position vis a vis others. Global civility, by contrast, is largely about understanding, solidarity and empathy with others. Global competitiveness and global civility are not coterminous. Today and in the near future most people around the world will not work in knowledge-intensive industries. While globalization has increased economic exchange and integration, most workers in developing nations remain in agriculture or the more traditional and least knowledge-intensive industries. Plenty of sweatshops or just-in-time factories in free-trade zones use traditional forms of organization with very hierarchical, alienating forms of production. While globalization often means that managers from different cultures now interact with workers from a particular nation, the forms of the interaction -- often exploitative and abusive -- do not necessarily foster positive cultural exchanges.

2 While the roots of the concept of Human Capital date back to Adam Smith in the 1800s, the concept was formalized by Gary Becker only in the twentieth century.
The educational goal of forming national identity also competes with the proposed effort of educating for global civility. Perhaps as a result of dislocations caused by globalization, there has been a reemergence of nationalism and populism around the world. Some of these regimes use schools to build legitimacy and to advance political agendas that foster intolerance.

The institutions of education are adept at defining national boundaries in the minds of students and at teaching national symbols and identity. National identity is often constructed by opposition to ‘others.’ Some states have schools advance views that openly challenge global civility, human rights, international covenants and peace.

In the last twenty years, the trend in educational governance has been toward decentralization to communities and schools, for the purpose of increasing the efficiency and local relevance of what is taught. It is not clear how the localization of education might impact the development of global civility. Some of the most traditional cultural conflicts find expression at the local level, where communities have clear incentives to preserve the values and memories that are at the root of many ethnic, cultural, and religious conflicts. I see no reason to expect cosmopolitanism from local communities.

5.2. The special role of policy entrepreneurs

The consequences of deficient global competency are slow to build up. In the short term, absent a major foreign policy crisis or economic or environmental catastrophe that can be directly attributed to global incompetence, they are invisible to the public and to educators. This is the reason global education is not a more central priority for education around the world.

Where global education gets on the policy agenda of governments or international institutions it will be because policy entrepreneurs make a convincing case that global education relates to problems which are already recognized as important by the public.

For instance, insufficient global competitiveness of the work force, as we have mentioned, may lead to a very narrow approach to developing global competence. Some might argue that to compete in the global economy what schools should do is to teach students to communicate and to work productively in teams, to solve problems and conflicts, to be entrepreneurial and creative, to by risk takers and initiators of change, and to use technology, to be competent in math and science at world standards (Nordgren, 2002). When the capacity of schools to do this well for all students is limited, how can these worthy goals and activities be displaced by adding foreign language study, human rights education, world history or geography or by the study of the process of globalization itself? An answer to that question is that the development of global competency contributes not only to an intrinsically valuable purpose, but also to the development of numerous other twenty first century skills.
In the United States, for example, an advocacy coalition including business, education and policy leaders for the development of 21st century skills has defined the following four as the knowledge and expertise students should master to succeed in work and life in the 21st century: 1) Core Subjects and 21st Century Themes, 2) Learning and 3) Of course, even a major global crisis which could be demonstrably linked to the lack of global competencies, might be insufficient to generate sufficient support for major initiatives in Global Education.

As Javier Corrales argues in discussing the politics of Education reform competing priorities, institutional weaknesses, and short political time horizons make basic and secondary education difficult political projects to enact. (Corrales 2007). I thank Martin Malin for bringing this point to my attention. Innovation Skills, 3) Information, Media and Technology Skills and 4) Life and Career Skills. Knowledge of World Languages is one of the nine core subjects they propose (in addition to Geography, History, Government, Science, Economics, Mathematics, Arts and English). In addition to these subjects the coalition proposes integrating 21st century interdisciplinary themes into core subjects, proposing the following four key literacies: Global awareness, Financial, economic, business and entrepreneurial literacy, Civic literacy and Health literacy. In addition to contributing to direct knowledge and skills recognized as important in this framework, global education provides a context to develop the four core skills in the framework. For example, to develop Learning and Innovation Skills by providing opportunities for Critical Thinking and Problem Solving as well as communication and collaboration, or supporting the development of information, media and technology skills by providing authentic contexts in which to acquire information literacy, media literacy and ICT literacy. Global education would also support the development of Life and Career Skills providing opportunities to develop flexibility and adaptability, initiative and self-direction, social and cross-cultural competency, productivity and accountability and leadership and responsibility (Partnership for 21st Century Skills, 2008).

It will take social entrepreneurship to articulate the interdependencies between Global Competency and other 21st century skills, as well as the intrinsic value of Global Competency as an important 21st competency in its own right. Coalitions such as the one mentioned can play a critical role making that case. In the United States other organizations are also playing this role such as the Committee for Economic Development, and influential organization dedicated to make recommendations for private and public policy to advance freedom and economic growth in the United States.

The Committee produced a policy document titled ‘Education for Global Leadership, The Importance of International Studies and Foreign Language Education for U.S. Economic and National Security (Committee for Economic Development, 2006). The Asia Society has played a similar role of advocating for greater emphasis on global competency in the schools and has supported the creation of a national network of education policy makers and practitioners focused on the identification and exchange of best practices in international education (Asia Society, 2001).
In the United Kingdom, Oxfam has played a similar role articulating the need for Global Citizenship Education and the potential contributions it can make to the development of more established curricular purposes. Oxfam GB has also developed a rich array of educational materials for teachers at different levels of education (Oxfam Development Education Programme, 2006b).

UNESCO and the United Nations system more generally have for decades advocated for human rights education and peace education in the conferences of member countries and in numerous publications. For instance, in the context of the United Nations Decade for Human Rights Education 1995-2004 there were many conferences, workshops and programs designed to support human rights education.

UNESCO formulated also Integrated Framework of Action on Education for Peace, Human Rights and Democracy which supported many similar activities.

But social entrepreneurs can contribute to the advancement of global education even in the absence of a supportive policy framework. By making the case for it and by developing specific activities, curriculum, instructional materials or education programs that develop global competency they can help define the field, and accumulate practice based knowledge that will eventually inform policy in this area. For example, much of the work of the Asia Society mentioned earlier in articulating a vision for global education has been informed by the identification and documentation of specific exemplary cases of good practice developed by teachers, principals and school district leaders.

The work of a single social entrepreneur illustrates the potential of this approach to advancing global education. Peter Copen, a New York businessman who was gravely concerned about the possibility of nuclear confrontation between the United States and the Soviet Union in the 1980s, started a project consisting of providing high school students in a small number of schools in both countries with video speaker-telephones, computers for email, and the funding for student/teacher exchanges. The purpose was to enable the students to engage in collaborative, project-based learning using those three modalities of interpersonal communication. Copen hoped that this would develop a model for replication whereby students would find a way to build enough trust among both societies and that, as this trust scaled up, it would contribute to preventing a nuclear war. Over a twenty year period Copen’s initiative extended into a nonprofit that sustains a very large network of school-to-school projects, now involving over 20,000 teachers and 2 million youth in more than 120 countries (http://www.iearn.org/). These efforts of a single individual launched a successful organization that has helped many young people around the world meet and collaborate with students from other countries. When Copen started his work what he was doing was clearly at odds with education policy – and foreign policy—in the United States and in the Soviet Union. His efforts were met with suspicion and antipathy by many government officials in both countries. Yet, using good marketing and political skills, and hiring the right
people, Copen was able to build alliances and find supporters that allowed his counter-
cultural intervention to become accepted and to expand.

Notably, iEARN is described as a context to support the development of multiple educational objectives. Its context is best captured in the articulated purpose from the iEARN Constitution which reads: “To empower youth and teachers to make a meaningful difference in the health and welfare of people and the planet”. iEARN educational objectives are to provide: A safe and structured environment in which youth can communicate A community of teachers and learners A known audience for writing and reading with a purpose An opportunity to apply knowledge in service-learning projects An inclusive and culturally diverse community. (iEARN 2008, p.1)

5.3. Developing a Knowledge Base to support Global Education
Because of the relatively more recent attention that global education has received, the knowledge base to inform its development is relatively more limited than the knowledge base to support literacy instruction, math education or science education.

There are germane fields where there is a more robust research tradition such as foreign language instruction, multicultural education, civic education and values education, but in many ways the research on global education is in a pre-scientific stage. This is because there is not, to date, a consensus on what the relevant outcomes are in this field, on how to measure those outcomes, and there is even less consensus on the most accepted methodologies to assess the efficacy of different approaches to develop global education. It took the field of reading instruction, for example, six to eight decades to resolve these issues to a sufficient extent to produce a reliable and accepted knowledge base to inform the practice of literacy instruction (Israel, S. and Monaghan, J. 2007).

The extant knowledge base is largely descriptive of current initiatives, an important step for sure in drawing lessons from experience. Advancing in the development of this knowledge base is imperative in order to obtain answers to the questions of what educational programs work well, with what effects, for what populations, in what contexts and at what costs. These are essential answers to include this topic on the policy agenda and to make claims on highly competed public resources.

5.4. Supporting the Preparation of Teachers and High Quality Instructional Materials
As mentioned, one of the essential requirements to advance global education is to develop high quality curricula, instructional materials and opportunities for teacher education. This is where the efforts of most intergovernmental and nongovernmental organizations have focused to date and their impact has been modest as most schools do not use these materials.
If teachers are to include global education in their schools they need a high quality curriculum, rich learning environments, access to technology to establish global connections and opportunities to develop their own global understandings and skills.

Global education can also be advanced by relying on self-directed efforts of students, supported for example by technology, or on peer education. In some areas it might be possible to tap community resources for example incorporating heritage language community members in enrichment foreign language programs or developing partnerships between universities and schools to expand foreign area studies.

UNESCO and the United Nations High Commissioner for Human Rights (http://www.ohchr.org/) through the World Program for Human Rights Education have developed several educational programs and curricula focusing on teaching human rights, on teaching non-violence, on peace education and on democratic education. Oxfam, GB has produced a rich catalogue of books and instructional resources for teachers and students to develop Global Citizenship (UNESCO, 1981, UNESCO, 2002a).

Some organizations have also developed specific curricula for global education. Oxfam GB has advocated the teaching of controversial contemporary subjects as a way to develop global citizenship, explaining that those are among the most important global challenges students will face and that they therefore need to be prepared to draw their own conclusions, make informed decisions and take considered action on these controversial issues but also because as students engage with those subjects they develop information processing skills, reasoning skills, enquiry skills, creative thinking and evaluation (Oxfam, 2006, p.5).

This is an approach followed by other programs. For instance the Choices for the 21st Century Education Program, developed by the Watson Institute for International Studies (http://www.watsoninstitute.org) in Providence, Rhode Island is a secondary school curriculum that proposes teaching with the news and with online resources foreign affairs topics in ways that present alternative policy options and engage students in an examination and analysis of their tradeoffs while challenging students to consider these issues from multiple perspectives.

The United Nations has developed a program to teach students about the United Nations system and about the global topics which the organization addresses in a series of simulations and competitions that provide students opportunities to reproduce the deliberations and dynamics of the United Nations General Assembly in reaching resolutions. Teaching economics provides also opportunities to teach about trade and globalization. The International Monetary Fund and the National Council on Economic Education in the United States have developed a curriculum to teach about economic interdependence.
Films and documentaries are also excellent resources to support also instruction and deliberation on global topics. Amnesty International has developed a series of curricula and lesson plans to teach human rights in the context of discussing contemporary films.

In addition to films, arts education more generally provides opportunities for students to open their mind to the world, for example with programs such as DIA in Mexico which bring art education to public schools, discussed by Claudia Madrazo in another chapter in this book. Arts education is also a very important way to develop creativity and innovation, both essential to help students address global challenges. Arts education, and films, can help evoke empathy for the other, help recognize commonality and difference, they can help students recognize the common humanity that lies beneath all different forms of cultural expression. For example, in 2002, UNESCO organized a world drawing context to have 4-7 year old children represent Peace. The winning entries were published in a book titled ‘Draw me peace’ which is an extraordinary resource not only to facilitate classroom conversations about this abstract concept, through the representations of very young children, but also a valuable tool to help students reflect on the challenges to peace in different parts of the world (UNESCO, 2002b).

Modern Information and Communication Technologies are significant resources to support global education. As mentioned already iEarn has used technology to facilitate the establishment of school to school collaborations across various geographies. Also relying heavily on technology NetAid, a nonprofit organization, supports the Global Citizen Corps a youth movement to fight global poverty. Using on-line profesional development NetAid educates high school students so they can mobilize their peers in efforts to end global poverty.

There is also a growing set of on-line and computer assisted tools to support foreign language instruction, including opportunities to practice with native speakers using low cost telecommunication technologies.

But the development of global competency extends beyond the study of foreign languages and social studies. Technology is providing new opportunities to engage students in the authentic study of science in ways that present well the global and cosmopolitan attributes to the enterprise. For instance, the Globe project managed by the University Corporation for Atmospheric Research in partnership with Colorado State University supported by the National Aeronautics and Space Administration, The National Science Foundation and the US Department of State is a worldwide hands-on primary and secondary school based Earth Science and education program providing students the opportunity to learn by taking scientifically valid environmental measurements, reporting their results, and then using their data, an data from other schools, to collaborate with scientists and students worldwide (http://www.globe.gov/).
Along similar lines, the Encyclopedia of Life is a web-based global effort to document and disseminate information on existing species which provides opportunities for students and youth around the globe to participate in data collection and species classification and interact with scientists in the project (http://www.eol.org).

6. Conclusions

The most important educational questions are, today as in the past, questions about purpose. Societies and communities need to have clear purposes for the schools they sustain, just as teachers and principals need purposes to align their efforts in teaching students, just as students need to see that the purpose of their education is to help them develop and achieve purposes in life. Paradoxically we don't think sufficiently often about purpose, at any of these levels. As a result, schools, teachers and students spend great efforts in ways that are dissociated from the purposes they value.

Globalization presents a new and very important context for all of us. This is of course a process, a space of possibility, rather than a destination. Preparing students with the skills and the ethical dispositions to invent a future that enhances human well being in this space of possibility is the most critical challenge for schools in our time. Global education is the new purpose for these wonderful recent inventions of humanity we call schools. To do this we need to focus on three objectives and on three avenues for action.

The objectives are to develop global values, foreign language skills and foreign area and globalization expertise. The avenues are to make the development of global competence a policy priority for mass education systems, to develop a scientific knowledge base that helps discern what works well, with what effects and at what costs, and to continue developing rigorous curriculum, instructional materials and opportunities for teacher education. The path is clear and within reach, and the potential rewards much greater than some of the costly and complicated approaches we still use to try achieve global peace and stability.

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