

More Than “Water Under the Bridge”: Initiating a Critical Democratic Interpretation of Economics Education

by

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Conscientization, Eco-Economics, and Class

Water usually runs downhill, but it always runs uphill to money. -American West colloquialism

When water supplies are deficient, those with money will divert resources to assure themselves that location and availability do not stop water from flowing to certain places (Rogers, 2008). With respect to polluted living environments in the United States, race is the biggest determiner of whether or not a community will be endangered by pollution or dumping (Bullard, 2005). In light of pressing economic and ecological problems, both at the macro and micro-level, classism and racism represent multicultural topics (Gollnick & Chinn, 2006; Koppelman & Goodhart, 2005) that lack sufficient coverage within economics education curricula (Agnello, 2005a; 2005b; 2006). We propose a compelling method of teaching critical literacy which at the same time promotes multicultural equality through economics curricula. Our discussion will focus on scarcity, an economic concept to be mastered as advised by states’ standards, in the contexts of one of the principal ecological problems experienced most by working class people and minorities in the U.S. and around the world--the problem of fresh water scarcity (World Water Assessment Program, 2006; Rogers, 2008).

Approaches to learning economics in school tend to emphasize abstract, rather than tangible content. Policy makers (e.g., Committee on Banking, Housing, and Urban Affairs, 2002) recommend enhancement of mathematics skills to address economic education teaching and learning deficiencies. However, conceptualizing, as these policy makers suggest, the human mathematical realities associated with interest from loan payments, credit cards, and investments represents an educational challenge that can easily overlook the issue of class (High School Economics/Dollars and Sense, 2008). Understandings of exponential concepts to calculate compounding processes is not enough. Maxwell & Lucey (2006) facilitated activities that introduced pre-service elementary school teachers (PSETs) to mathematical and social justice topics related to personal finance. They reported that the confidence of PSETs to teach related items was higher before teaching the information than after. To what extent are teaching preparations sufficient for the mathematical complexities associated with advanced economic or financial learning?

Conceptualizing economic issues requires more than knowledge, comprehension, and application of concepts and theories. Although economic relationships have always been important vehicles of international, national, and local relationships, global patterns of economic

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inequities have intensified in the early 21st century. Internationally, vast differences in economic development occur between the Northern and Southern hemispheres and in some areas between north and south within regions. Those that have “advanced” economic systems employ an argument of merit to explain their status when actually their wealth and advancement result from favorable environmental conditions more than effort (Diamond, 1999). Transboundary conflicts over rights to water and other basic resources illustrate these challenges. We wish to substitute a new set of values that promotes general welfare over the capitalistic values of competitive attitudes of ownership, limited conceptualization of sharing, prioritizations of profit over welfare, and other capitalistic orientations that distort patterns of decision-making (Bobbitt, 2002; Oakes & Lipton, 2007; Phillips, 2006). In order to achieve such a shift in values, change needs to begin in school.

In this article we propose some strategies to develop critical literacy by highlighting a sample lesson concerning scarcity from the National Council on Economic Education’s (2005) *Thinking Globally: Effective Lessons for Teaching about the Interdependent World Economy*, and contextualizing it within Banks’ (1995/2000) dimensions of multicultural education. We provide a model and suggest two others for integrating the subject of water scarcity, starting with local inequities and moving toward global perspectives in the curriculum and building toward school and community transformation through critical social engagement.

Multiculturalism, Ecology, and Economics

A multicultural education environment should address the economic bases for distributing local and global resources within a finite ecological and highly inequitable system (Agnello, 2006; Council on International and Public Affairs, 2007; Lucey, 2007; Lucey & Cooter, 2008; Rogers, 2008). In what the International Center for Arid and Semi-Arid Land Studies at Texas Tech University calls “The Water Century,” the desert and semi-arid regions of the U.S. are encountering problems and generating solutions to water concerns. “While the water stress we are now encountering in Texas and globally is serious, in terms of the availability of fresh water, it is nothing compared to what may be in our future” (Hopper, 2007, p. 20). International and transboundary water issues are indicators of struggles over natural resources that many nations already endure and that the United States, too, will face unless governments take action to avert an impending crisis (Rogers, 2008). An examination of the water differences between the United States and Mexico reveals that, except for the Southwest and areas in northern Georgia affected by drought, the United States is water rich, while Mexico is water poor (Hopper, 2007). Policymakers are studying scientific principles of hydrogeology and state conduct to arrive at equitable decisions about how water should be allocated (Hopper, 2007). Transboundary water conflicts extend across the entire U.S. and Mexican border and to a large degree occur along other world borders where intense human activity exists (Fernandez & Carson, 2002). Realizing the broad consequences of this challenge, the United Nations declared:

The key challenges of contemporary water management can only be understood within the very broad context of the world's socioeconomic systems. Changing demographics and population movements; shifts in geopolitics, with new country boundaries and alliances; fast developing information and communication technologies; plus the impacts of climate change and extreme weather conditions are all making the world a more challenging place for decision-makers. Poverty,

warfare and preventable disease still affect much of the world's population, often in developing countries and in increasingly crowded urban conditions. These are elements of the broad and often fast changing contexts within which we must place our discussions on water resources management (World Water Assessment Program, 2006, p. 3).

Economic, Environmental Inequities, and Race

Human civilization has struggled with the efforts of those in power to skew patterns of economic judgment in their favor, even within primitive societies (Lucey, Kruger, & Hawkins, 2008). In a more contemporary consideration, Loewen (2006) explains how after the period of reconstruction, deliberate attempts to disenfranchise African-American populations ranged from ostracization in the North to subrogation (substituting one creditor for another) in the South. Regional patterns of discrimination (Pullian & Van Patten, 2007) mirror corporate and other social leaders' policies and practices to control education and literacy efforts in systemic efforts to prevent the social advancement of underrepresented cultural groups (Anderson, 1988). As a result, wealth disparities between groups are exacerbated.

According to the U.S. Census, wealth disparities abound among various cultural groups (U.S. Department of Commerce Census Bureau, 2006) and have documented cogently the disparities in earnings and wealth accumulation among the lowest and highest earners in the nation, as well as among Blacks, Whites, and Hispanics (Bezruchka, 2006; Cohen, 2003; Conley, 2001; Council on International and Public Affairs, 2007; Kennickell, 2006; Spring, 1998). While African Americans, Latinos, and other non-White groups earn significantly lower incomes than Whites do, discrepancies occur within groups as well as between groups. For example, the lowest fifth of African American income earners lost 9.5% of their incomes between 1979 and 1997 while the wealthiest fifth increased theirs by 30% (Banks & McGee, 2004). We interpret the statistics above (Banks & McGee, 2004), which derive from census data, as indicative of recurring discrimination, and hierarchical class structure. They represent the manifestation of historical racial discrimination patterns placing certain groups at a disadvantage when it comes to achieving financial success. Even with comparable education, black men earned on the average 72.6 % of what white men earn and find themselves less than half as likely to work in service jobs, with only one out of three blacks as compared to one out of two whites in white collar jobs (Spring, 1988).

A conservative interpretation of race and economic phenomena is congruent with Straight's (2001) findings of clear differences in the asset structures of White and African American households as matters of choice. Yet, Bowen (2008) observes that research concerning personal finances of African Americans lack "small scale" studies to interpret patterns of financial socialization and their bases. Many secondary students in the economics classroom do not understand that, in addition to economic discrimination that the poor, including Hispanic, African-American, and White families experience, they also often suffer from polluted water, caustic dumping, and other forms of environmental racism (Bullard, 2005; Frazier, Margai, & Tetey-Fio, 2003; Washington, 2005). As a result, many of those who reside in such neighborhoods suffer from health problems due to air, water, and soil pollution in and around their homes, in addition to de-valuation of property so that sale of their homes becomes impossible (Checker, 2005; Hofrichter, 2002; Washington, 2005). Grassroots organization has led to citizen engagement to overcome domestic environmental racism (Bullard, 2005;

Washington, 2005). In spite of the organization and progress made, many African Americans still endure polluted water supplies and communities (Bullard, 2005; Washington, 2005).

A multiculturally relevant economics education curriculum must account for human welfare, health, and moral issues locally and internationally (Bullard, 2005; Diaz, Massiala, & Xanthopoulos, 1999) and encourage students' application of solutions to these challenges.

Since economic curricula do not address the gross economic disparities that have resulted from the recent economical restructuring in wealth distributions in the U.S., (Gollnick & Chinn, 2006) educators lack the knowledge or authority to discuss the local inequities with their students. Thus, youth enter society with a biased interpretation of these conditions. Optimally, economic education could facilitate discussion about the relationship between economic development and natural resources (particularly, water) and allow for a wide range of considerations that can be integrated into a variety of subjects. Students can make connections between ecology and international citizenship by becoming informed about interdependency of many contingencies in the global economy and ecology (Daly, 2005; Diaz, Massialas, & Xanthopoulos, 1999; Parker, Ninomiya, & Cogan, 2002; Rogers, 2008; World Water Assessment Program, 2006). While literacy for citizenship (which includes multicultural literacy) represents an important education goal, the methods for teaching literacy and the materials employed often preclude the development of groups of citizens and the awareness of the American and global economic systems (Agnello, 2001; 2005a; 2005b; 2006; Agnello & Deleon, 2004, 2005).

A critical "read" of Neoliberalism is that it has disenfranchised both local and international citizens and workers, and globalization and technology have not delivered on many economic promises locally or in lesser economically developed countries. New dialogs among many individuals and nations are needed to address current inequities and impending crises (Nnaemeka, & Exeilo, 2005; Olaniran & Agnello, 2008; Parker, Ninomiya, & Cogan, 2002; Rogers, 2008). The economics classroom is a good setting to consider such issues.

Economics Education

According to the National Council on Economic Education's (2007) Survey of the States nearly all states include economics in their social studies standards with over four-fifths requiring their implementation. Nevertheless, the survey reports that less than two-fifths of states require students to take an economic course before graduation and less than one-half require testing on economics (a decrease from the 2004 survey).

In Table 1 we present the National Council on Economic Education (2007) survey's findings for the four states having the largest student enrollments. All of the tabled states have poverty rates above the mean for the U.S. A synthesis of the high school economics curricula in California, Florida, New York, and Texas determines that the free enterprise system is an educational priority in all their economics education standards. As indicated in the *Texas Administrative Code* (2008), "The content enables students to understand the importance of patriotism, function in a free enterprise society, and appreciate the basic democratic values of our state and nation..." (p. 1). Such skills and predispositions assume knowledge built in Kindergarten through Grade 12 in citizenship, economics, geography, government, history, culture, social studies, science, technology, and society. In addition to studying government in California, standards require grade twelve students to ". . .master fundamental economic concepts, applying the tools (graphs, statistics, equations) from other subject areas to the understanding of operations and institutions of economic systems" (California State Board of

Education, 1998, pp. 54-61). Analyses of the systems are founded on basic economic principles of micro- and macroeconomics, international economics, comparative economic systems, measurement, and methods. Similar standards are required in the Florida social studies curriculum (Florida Education Standards 8th Grade Social Studies Standards, 2008).

Table 1

Poverty Rates and Economics Education in the Four States Serving the Most Students

| State | Poverty Rate (Rank)* | Level of Standard | Required | Course(s) Required to be Offered and Grade Level(s) | Course(s) in Which Enrollment is Required and Grade Level(s) | Tested Class |
|------------|----------------------------|--|----------|---|--|--------------|
| California | 13.10% (23 rd) | Content Standards K-12 | Yes | Economics (HS) | Economics (HS) | No |
| Florida | 12.60% (26 th) | Content Standards (K-12) / Student Performance Standards, (HS) | Yes | Economics (HS) | Economics (HS) | Yes |
| New York | 14.20% (16 th) | Content Standards PreK-12 | Yes | Economics, the Enterprise System and Finance (HS) | Economics, the Enterprise System and Finance (HS) | Yes |
| Texas | 16.90% (9 th) | Content Standards/Essential Knowledge & Skills, (HS) | Yes | Economics (HS) | Economics (HS) | Yes |

*Source U.S. Department of Commerce Census Bureau, 2006

Joshi's (2004) analysis of New York state economic standards found an emphasis on content concerning macroeconomic concepts (content involving economic patterns associated with population groups) more than personal economics or financial literacy. In other words, the standards focused on financial relationships among groups of people, rather than individuals. There are negative and positive aspects of focusing on macroeconomic concepts. By abstracting knowledge away from the self, family, and locale, study of the national economy makes it seem that the economy is independent of personal and bureaucratic social practices (Foucault, 1972). Furthermore, the New York State economic education standards present these macro-oriented social forces, power plays, and their resultant social and economic practices that affect ecological and environmental conditions as unproblematic--often portrayed as irreversible. In light of pressing economic and ecological world and local problems, classrooms should employ discovery processes that are both macro- and micro-oriented, the one feeding into the other, to enable students to construct contextually cogent meanings of economic concepts and to defend their findings through dialogue (Agnello, White, & Fryer, 2006).

At the federal level, an initiative by the Committee on Banking, Housing, and Urban Affairs Committee (2002) to build on the states' economics education curricula assumes better

mathematics skills will result in financial literacy. However, the content supporting these skills and the contexts in which they are applied must relate to the patterns of social decisions that students will consider. Ball, Goffney, and Bass's (2005, p. 4) assertion that "One way in which mathematics teaching can help to build the resources for a pluralistic society is through the development of tools for analysis and social change" advocates that the learning of mathematics has a social purpose, and that the basic skills are not meaningful in and of themselves. Knowledge of skills and concepts lacks meaning unless the learner can connect them with his or her background or environment or exercise agency through manipulation of numbers.

Employment of such strategies should begin early in child development. Brantlinger's (2008) challenges using critical mathematics in an urban secondary education setting illustrate the difficulties resulting from conditioning of process memorization among children and youth. Nevertheless, Maxwell's (2008) argument that "students (should) learn from their mathematics teachers about the underpinnings of financial literacy through life examples and experiences" (p. 165) reminds us of the importance of relating classroom learning to daily life. A respectful economics learning process utilizes curricular and instruction processes that embrace learners' contexts and learning differences. Building economics learning from the scarcity/resource allocation issues that children and youth encounter regularly, educators may begin to disrupt the cycle of disinterest and motivate their students to social action. Applying Lesser's (2007) mathematically focused social problem solving to discussions about water rights and water scarcity can stimulate opportunities for conversations that most classrooms avoid.

Financial literacy as proposed in this discussion employs a Freirean (Freire, 1970) critical literacy, whereby students on the lower end of the economic sector would work to transform their situations through literacy and social action. Students on the upper end would use their social capital and privileged positions to address social inequities through politically engaged literacy. Dialogue among sectors would inform about the various strategies and their synthesis into a holistic effort towards social change. An example of this kind of learning occurs in some service learning classes. The Tecnológico de Monterrey's (2007) Quality Enhancement Plan has undertaken such a national effort at social transformation.

Using Water Rights for Inculcating in Our Children a More Just Set of Economic Values

The United Nations has declared that all humans have rights to water (World Water Assessment Program, 2006). The U.S. Department of Education's (2006) *Economics Framework for the National Assessment of Educational Progress* references the international economy; however, it does not refer to water or scarcity, but rather promotes the concept of *resource allocation*. There is ample evidence that economic sustainability must start with the fundamental life force of water. One of the major principles of social studies concerns how civilizations grew around bodies of water (Bentley & Ziegler, 2000). The gravity of the situation of the world's water supply as it is described in the United Nations Water Report and the proliferation of research pointing to the importance of thinking about the water question in relation to the international and global economy motivate our utilization of this basic resource to illustrate how water awareness inculcated in our children, when it is taught at both a macro and a micro level, represents one of the most important economical concepts for our schools.

In our Table 1 presentation of economics education standards in four of the most populous states (New York, California, Texas, and Florida), we indicate no precedents or foundations upon which to base an innovative vision of economics education, even though all promoted teaching scarcity as an economic concept. In Table 2, we propose a model whose general intent is to guide students' critical thinking about the interdependence of the world's social, political, and economical systems and subsystems (Daly, 2005; Gore & Guggenheim, 2006; Rogers, 2008). Specifically, through Table 2, we promote critical literacy by highlighting a sample lesson concerning scarcity from the National Council on Economic Education's (2005) *Thinking Globally: Effective Lessons for Teaching about the Interdependent World Economy*, and contextualizing it within Banks' (1995/2000) dimensions of multicultural education. In doing so, we provide a model for integrating the subject of water scarcity, starting with local inequities and moving toward global perspectives in the curriculum, and finally building toward school and community transformation through critical social engagement.

Also in Table 2, we outline a format relying on a table of specifications within global systems, as recommended by Diaz, Massialas, and Xantopoulos (1999), that builds on the Banks' (1995/2000) multicultural dimensions. Both of these frameworks can yield productive advancement from local and self awarenesses to broader engagement in transformative praxis. Experts estimate that each person requires 1,000 cubic meters of fresh water per year (Rogers, 2008). In light of this statistic, students examine the scarcity of water as a global resource, advancing from a knowledge level of including diversity in the curriculum to an application stage where learning communities act to transform inequities in resource allocation and conservation. The left-hand column in Table 2 identifies the problem identification-hypothesis formation-solution structure to promote a range of student thinking about water scarcity, through interim steps that promote (a) Prejudice Reduction and (b) Equity Pedagogies and (c) Empowering Social Structures to the problem-solution discussion. This is vital to our model.

Table 2

An Application of Diaz, Massialas, & Xanthopoulos' (1999) Table of Specifications, Global Systems: The Concept of Scarcity and its Relationship to Water Rights.

| Banks' (1995/2000) Dimensions of Multicultural Education | Concepts of World System | World Subsystems | Political World Subsystem | Economic World Subsystem | Social World Subsystem | Ecological World Subsystem |
|--|--|--|---|--|--|--|
| Content Integration Identifying a Problem/issue | Students will see maps of inter-connected geographic regions | Students distinguish between western and eastern systems, as well as northern and southern | Students ask: How do states and nations address water shortage issues? | Students explore how farmers along the Mexican border of the Rio Grande River irrigate their crops | Students view ethnic groups' interaction concerning water resources (e.g. in the Mideast, Africa, South or Central America), communities in the US | Students view Gore and Guggenheim (2006) "An Inconvenient Truth" to determine what the local effects of global warming will be as compared to the effects in other parts of the world Students calculate how much fresh water one person requires over a lifetime |
| Knowledge Construction Forming a Hypothesis Exploring Consequences Making a Generalization | Students ask questions about water availability in various parts of developing countries | Students research water issues in countries like Israel where there are competing factions for land and water | Students view international policies from children's perspective | Students study aquifer data to determine future water supply in our country and other countries such as Mexico and Asian and African countries | Students test water in all areas of a city Students look at water usage and water table resources | Students look at water pollution effects in minority neighborhoods |
| Prejudice Reduction Analyzing Data | Students articulate that all people need pure water | Students seek information about specific countries' and areas' water issues | Students communicate with foreign students to make statements about water needs | Students analyze United Nations and other data | Students visit rural community water treatment center | Students examine social/political/economical policies contributing to harmful dumping in minority neighborhoods |
| Equity Pedagogies Testing Ideas | Students and teacher propose how to promote water access to all | Students see connections between world subsystems | Students promote equity in countries access to clean water | Students articulate economic solutions related to water scarcity for developing countries | Students begin making connections between better neighborhood water access vs. poor neighborhood access | Students articulate the need for a clean environment and water supply for all neighborhoods |
| Empowering School/Social Structures Applying a Generalization | Students study and communicate with international students about water recycling projects/ initiatives | Students take virtual fieldtrips to other countries, lakes, water reservoirs, etc. to make plans for water reclamation | Students examine environmental racism and voice concerns | Students start on line efforts to promote safe and clean water policies for the maquiladores of the Texas/Mexico border | Students compare water resources and supply in the United States with those in African countries such as Chad, Sudan and Nigeria and those of Asia | Students do action research to promote cleaning up water supplies and the environment, as well as the importance of water conservation and recycling |

Implementing Critical Eco-Economic Literacy

The model presented in Table 2 is a road map with suggested examples that can be altered to suit the learning contexts. Banks's (1995/2000) five dimensions of multicultural education include pedagogical events promoting an entire arc of discussion and learning about water scarcity and economics, from content integration to knowledge construction to prejudice reduction to equity pedagogies, and finally to an empowerment phase that works for structural changes at the school and in the community. Such growth is the challenge to all multicultural educators who envision social justice and equity principles. Going across the matrix, columns relate to the Diaz et al. (1999) model and its concepts of world systems, world subsystems, political world subsystems, economic world subsystems, social world subsystems, and ecological world subsystems.

To teach one column, (e.g., the economic world subsystem), content integration would promote information seeking about how farmers along the Mexican border of the Rio Grande River irrigate their crops. Then constructing their own knowledge, students would study aquifer data to determine future water supply in our country and other countries such as Mexico, as well as Asian and African countries. Subsequently, they can reduce their prejudice by examining United Nations and other scientific data. An exercise in equity pedagogy would engage students in articulation of economic solutions related to water scarcity for developing countries. Moving toward transformative practice, students might start online efforts to promote safe and clean water policies for the *maquilladores* of the Texas/Mexico border. Integrating local and international information highlights for the students details of many geographic regions in the various stages of awareness building. Guidelines in the model can engage learners in scarcity discussion with international information that helps contextualize their learning and action at the local and the global levels, which are requisite in our era of scarcity and global warming as the world populations' struggle for survival and economic development simultaneously (Oakes & Lipton, 2007).

Other Models

There are several frames that an educator can utilize to teach a more just set of economic values. One might also employ the Parker (1991) social studies democratic framework for five essential learnings including the democratic ideal, cultural diversity, economic development, global perspective, and participatory citizenship. Throughout history, geography, and civics curricula, these five components lend perspective on the various ways that water would be regarded in the *democratic ideal* that took into consideration *cultural diversity*, and accounted for *economic development* from a *global perspective* assuming *participatory citizenship*. A lesson could start with any of the five concepts and build toward prejudice reduction, equity pedagogy, and transformational teaching and learning.

A third social studies framework that might be more appropriate for the lower grades, particularly for understanding the local situation upon which to advance toward global action, is one developed by Todd and Agnello (2006) in which themes that guide the student's study include people, geography, history, primary sources, and citizenship/ problem solving. By starting with the available resources of rural populations, establishing connections between schools and the community, and then progressing to more international educational sharing, scarcity of water as a vital economic resource can be explored thoroughly. Connecting people to

their water sources in the present and past through interview/s and e-pals communication and other primary sources gives a more comprehensive understanding of water **scarcity** as indispensable to survival and economic productivity. Where technology support and resources are rare, local interviews and oral history instill the interest that can be supplemented with school and other library resources such as *National Geographic* and *Scientific American*.

Importance to Education

We cannot understate the importance of developing in the students a critical interpretation of economics that does not focus on standards to the detriment of teaching critical literacy about economic and ecological inequities and crises. If economic education is to benefit all citizens, then educators must reexamine interpretations of economics, the sources of these interpretations, and the resulting patterns of population benefits. Textbooks rarely address class issues (Agnello & Lucey, 2008; Agnello, Sarria, & Slater, 1996; Loewen, 1995) and divert attention from the ownership and control of international, national, and local assets, justifying inequality based on “ownership” as an earned right based on *merit*. Diamond’s (1999) description of the connections between population development and environmental resources reminds us that fate has a role in our global presence and our human responsibilities. Acknowledging circumstances over which we have little power represents a daunting challenge for a nation where less than nine percent of surveyed high school seniors consider financial problems as beyond a person’s control (Mandell, 2007).

A critical approach to economics education represents a needed fundamental tenet of multicultural education in a democratic capitalist society and world. Critical economic education would lead students to reexamine power, knowledge, eco-economy, and social and economic dynamics. If guided in moral and ethical thought, students can see the imperative to reconsider overuse of scarce resources and the implications for groups within the U.S. and other societies around the world. They can also begin to petition world governments to invest the trillions of dollars (Rogers, 2008) needed to support the infrastructure to deliver fresh water around the world.

References

- Agnello, M. F. (2001). *A postmodern literacy policy analysis*. New York: Peter Lang.
- Agnello, M. F. (2005b, February). Toward a critical economic literacy. Paper presented at Southwest Educational Research Association Convention New Orleans, Louisiana
- Agnello, M. F. (2005a, April). Critical economic literacy. Paper presented at Texas National Association for Multicultural Education 4th annual Conference, Houston, Texas.
- Agnello, M. F. (2006, March). Economic education: A multicultural mission. Invited paper presented at annual meeting of the American Educational Research Association. San Francisco, California.
- Agnello, M. F., & Deleon, D. (2004, April). The decline of critical literacy skills: A study of pre-service teachers. Paper presented at the annual meeting of the American Educational Research Association. San Diego, California.
- Agnello, M. F., & Deleon, D. (2005). Beyond functional literacy: Educating for self, work, and citizenship. *Literacy Community Education Journal*, 30(10), 22-28.

- Agnello, M. F., & Lucey, T. A. (2008). Toward a critical economic literacy: Preparing K-12 learners to be economically literate adults. In: D. E. Lund, & P.R. Carr, (eds.) *Striving for political literacy and social justice*. New York: Peter Lang.
- Agnello, M. F., Sarria, M., & Slater, R. (1996, Spring/Summer). Installment in Research and Policy Report Series. *Journal of Public Management and Social Policy*, Report IV.
- Agnello, M. F., White, D., & Fryer, W. (2006). Toward twenty-first century global citizenship: A teacher education curriculum. *Social Studies Research and Practice*, 1(3), 322-326.
- Anderson, J. D. (1988). *The education of blacks in the South, 1860-1935*. Chapel Hill, North Carolina: The University of Chapel Hill Press.
- Ball, D. L., Goffney, I. M., & Bass, H. (2005). The role of mathematics instruction in building socially just and diverse democracy. *The Mathematics Educator*, 15(1), 2-6.
- Banks, J. A. (1995/2000). Multicultural education and curriculum transformation. In F. W. Parkay and G. Hass (Eds.), *Curriculum Planning: A Contemporary Approach* (7th Ed), (pp. 254-263). Boston: Allyn and Bacon. Reprinted from the *Journal of Negro Education*, 64(4), 390-395.
- Banks, J. A., & McGee, C. (Eds.). (2004). *Multicultural education: Issues and perspectives*. Hoboken, New Jersey: Wiley.
- Bentley, J. H., & Ziegler, H. F. (2000). *Traditions and encounters: A global perspective on the past*. St. Louis, MO: McGraw Hill.
- Bezruchka, S. (2006). *Pophealth richest 1% of Americans own almost 35% of all wealth, bottom half only 2.5%*. Retrieved July 25, 2007 from:
<http://mailman1.u.washington.edu/pipermail/pophealth/2006-April/001241.html>
- Bobbitt, P. (2002). *The shield of Achilles: War, peace, and the course of history*. New York: Knopf.
- Bowen, C. F. (2008). Money matters of African Americans. In J. J. Xiao (Ed.) *Handbook of Consumer Finance Research* (pp. 287-302). New York: Springer.
- Brantlinger, A. (2008). Economic equality and secondary mathematics. In T. A. Lucey & K. S. Cooter (Eds.). *Financial literacy for children and youth* (pp. 276-297). Athens, GA: Digitaltextbooks.
- Bullard, R. D. (Ed.) (2005). *The quest for environmental justice: Human rights and the politics of pollution*. San Francisco, CA: Sierra Club Books.
- California State Board of Education (1998). Grade 12 Content Standards. (Adopted October, 1998). Retrieved on April 29, 2008 from
<http://www.cde.ca.gov/be/st/ss/documents/histsocscistnd.pdf>
- Checker, M. (2005). *Polluted promises: Environmental racism and the search for justice in a Southern town*. New York: University Press.
- Committee on Banking, Housing, and Urban Affairs. (2002). *The state of financial literacy and education in America*. (88-644PDF). Washington, DC: U.S. Government Printing Office.
- Cohen, M. A. (2003). *Report on the racial impact of GMAC's finance charge markup policy-In the matter of Addie T. Coleman et al. v. General Motors Acceptance Corporation (GMAC)*. Retrieved on October 2, 2003 from:
<http://www.njcitizenaction.org/crautofinancreport.html>
- Conley, D. (2001). Decomposing the Black-White wealth gap: The role of parental resources, inheritance, and investment dynamics. *Sociological Inquiry*, 71(1), 39-66.

- Council on International and Public Affairs. (2007). *Too much: A commentary on excess and inequality*. Retrieved on July 23, 2007 from <http://www.cipaapex.org/toomuch/index.html>
- Daly, H. E. (2005). Economics in a full world. *Scientific American*, 293(3), 100-107
- Diamond, J. (1999). *Guns, germs, and steel: The fates of human societies*. New York: W.W. Norton and Company.
- Diaz, C. F., Massialas, B. G., & Xanthopoulos, J. A. (1999). *Global perspectives for educators*. Boston: Allyn and Bacon.
- Fernandez, L., & Carson, R. T. (Eds.). (2002). *Both sides of the border: Transboundary environmental management issues facing Mexico and the United States*. Boston: Kluwer Academic Publishers.
- Florida Education Standards 8th Grade Social Studies Standards. Retrieved April 29, 2008 from <http://etc.uf.edu/flstandards/sss/pdf/>
- Foucault, M. (1972). *The archaeology of knowledge*. Translated by A.M. Sheridan Smith. New York: Pantheon Books.
- Frazier, J. W., Margai, F. M., & Tettey-Fio, E. (2003). *Race and place: Equity issues in urban America*. Cambridge, Massachusetts: Westview Press.
- Freire, P. (1970). *Pedagogy of the oppressed*. New York: Seabury Press.
- Gollnick, D. M., & Chinn, P. C. (2006). *Multicultural education in a pluralistic society*. Columbus, Ohio: Pearson.
- Gore, A., & Guggenheim, D. (2006). *An inconvenient truth*. Paramount Home Entertainment. *High School Economics/Dollars and Sense: The Magazine of Economic Justice*. Retrieved April 29, 2008 from <http://www.dollarsand sense.org/archives/2002/0502maier.html>
- Hofrichter, R. (Ed.). (2002). *Toxic struggles: The theory and practice of environmental justice*. Salt Lake City: The University of Utah Press.
- Hopper, K. D. (2007). The water century. *Archways: The search for discovery at Texas Tech University*, 2(1), 18-23.
- Joshi, P. (2004, April). *Economic education ideology in state economic standards: A content analysis*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, California.
- Kennickell, A. B. (2006). *Currents and undercurrents: Changes in the distribution of wealth, 1989-2004*. Federal Reserve Board. Retrieved on July 25, 2007 from: <http://www.federalreserve.gov/pubs/oss/osss2/scfindex.html>
- Koppelman, K. L., & Goodhart, R. L. (2005). *Understanding human differences: Multicultural education for a diverse America*. Boston: Pearson/Allyn and Bacon.
- Lesser, L. (2007). Critical Values and Transforming Data: Teaching Statistics with Social Justice. *Journal of Statistics Education*, 15(1). Available online: <http://www.amstat.org/publications/jse/v15n1/lesser.html>
- Loewen, J. W. (1995). *Lies my teacher told me: Everything your American History textbook got wrong*. New York: Touchstone.
- Loewen, J. W. (2006). *Sundown towns: A hidden dimension of American racism*. New York: Touchstone.
- Lucey, T. A. (2007). The art of relating moral education to financial education: An equity imperative. *Social Studies Research and Practice*, 2(3), 484-498.

- Lucey, T. A., & Cooter, K.S. (Eds.) (2008). *Financial literacy for children and youth*. Athens, GA: Digitaltextbooks.
- Lucey, T. A. Kruger, D. P., & Hawkins, J. M. (2008). Grasping the foundational roots of economic perceptions: Pre-Colonial West Africa and the Bantu. In T. A. Lucey & K. S. Cooter (Eds.). *Financial literacy for children and youth* (pp. 316- 334). Athens, GA: Digitaltextbooks.
- Mandell, L. (2007). *Financial literacy: Improving education. Results of the 2006 National Jump\$tart Coalition Survey*. Washington, DC: Jump\$tart Coalition.
- Maxwell, S. A. (2008). Mathematics and financial literacy: Collaboration or conflict? What are mathematics educators' responsibilities? In T. A. Lucey & K. S. Cooter (Eds.). *Financial Literacy for Children and Youth* (pp. 149-169). Athens, GA: Digitaltextbooks.
- Maxwell, S. A., & Lucey, T. A. (2006, February). *Pre-service elementary teachers' confidence in teaching about money: Generating interest from mathematics*. Paper presented at the annual meeting of the Association of Teacher Educators, Atlanta, Georgia.
- National Council on Economic Education. (2005). *Thinking globally: Effective lessons for teaching about the interdependent world economy*. International Monetary Fund: A Public Center for Economics Education. Washington, D.C.
- National Council on Economic Education (2007). *Survey of the states: Economic and personal financial education in our nation's schools in 2007: A report card*. Retrieved May 30, 2008 from <http://ncee.net/about/survey2007/NCEESurvey2007.pdf>
- Nnaemeka, O., & Exeilo, J. N. (2005). *Engendering human rights: Cultural and socioeconomic realities in Africa*. New York: NY: Palgrave Macmillan.
- Oakes, J., & Lipton, M. (2007). *Teaching to change the world* (3rd edition) Boston: McGraw Higher Education.
- Olaniran, B., & Agnello, M. F. (2008). Globalization, educational hegemony, and higher education, *Multicultural Education & Technology Journal*, 2(2), 68-86.
- Parker, W. C. (1991). *Renewing the social studies curriculum*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Parker, W. C., Ninomiya, A., & Cogan, J. (2002). Educating world citizens: Toward multinational curriculum development. In W.C. Parker (Ed.) *Education for democracy: Contexts, curricula, assessments*, Volume 2 in Social Education (pp. 151-182). Greenwich, CN: Information Age Publishing.
- Phillips, K. (2006). *American theocracy. The peril and politics of radical religion, oil, and borrowed money in the 21st century*. New York: Penguin Books.
- Pullian, J. D., & Van Patten, J. J. (2007). *History of education in America*. Columbus, Ohio: Pearson.
- Rogers, P. (2008, August). Facing the freshwater crisis. *Scientific American*, 46-53.
- Spring, J. (1988). *Conflict of interests: The politics of American education*. New York: Longman.
- Spring, J. (1998). *Education and the rise of the global economy*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Straight, R. L. (2001). Survey of consumer finances: Asset accumulation by race. *Review of Black Political Economy*, 29(2), 67-81.
- Tecnológico de Monterrey (2007). *Quality enhancement plan*. Retrieved on August 18, 2008 from: http://cmpublish.itesm.mx/wps/portal/english/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Y_QjzKLd4kPdQPJgFghzvqRaCJOcBFfj_zcVP0goEyKOVDE0MIIPyonNT0xuVI_WN9bP

0C_IDc0otzb0REArrQenw!!/delta/base64xml/L0lJSk03dWIDU1EhIS9JRGpBQU15QUJ
FUkVSRUlnLzRGR2dkWW5LSjBGUm9YZmcvN19EXzFCMg!!?WCM_PORTLET=P
C_7_D_1B2_WCM&WCM_GLOBAL_CONTEXT

Texas Administrative Code (2008) (TAC), Title 19, Part II Chapter 113. (Last modified in 2007). *Texas essential knowledge and skills for social studies sub chapter C high school*. Retrieved May 19, 2008 from <http://www.tea.state.tx.us/rules/tac/chapter113/index.html>

Todd, R. H., & Agnello, M.F. (2006). Learning from rural school communities: Insight into a P-12 Schoolhouse. *Social Studies*, 4, 178-184.

U.S. Department of Commerce, Census Bureau. (2006). GCT1701. *Percent of People Below Poverty Level in the Past 12 Months (For Whom Poverty Status is Determined)*: 2006. Retrieved May 3, 2008 from

[http://factfinder.census.gov/servlet/GCTTable?_bm=y&-geo_id=01000US&-
_box_head_nbr=GCT1701&-ds_name=ACS_2006_EST_G00_&-_lang=en&-
mt_name=ACS_2006_EST_G00_GCT1701_US9&-format=US-9](http://factfinder.census.gov/servlet/GCTTable?_bm=y&-geo_id=01000US&_box_head_nbr=GCT1701&-ds_name=ACS_2006_EST_G00_&-_lang=en&-mt_name=ACS_2006_EST_G00_GCT1701_US9&-format=US-9)

U.S. Department of Education. (2006) *Economics framework for the national assessment of educational progress*. Retrieved August 5, 2008 from:
http://www.nagb.org/pubs/econ_fw_06.pdf

Washington, S. H. (2005). *Packing them in: An archaeology of environmental racism in Chicago, 1865-1954*. Boulder, CO: Lexington Books.

World Water Assessment Program. (2006). *Water: A shared responsibility. The United Nations world water development report II: Executive summary*. Retrieved on April 3, 2008 from <http://unesdoc.unesco.org/images/0014/001444/14409E.pdf>

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