

REFORM OR NEWFORM? THE FUTURE OF PUBLIC EDUCATION THROUGH THE EYES OF AN INTERNATIONAL POLYTECHNIC HIGH SCHOOL

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Much has been written over the past decade regarding public school reform. One university, Cal Poly Pomona, has responded by supporting a unique high school on its campus. The Los Angeles County International Polytechnic High School prepares graduates to be leaders in their community, the nation, and the world. Graduates are to productively apply the knowledge they acquire to solve real problems in the world. They will be lifelong learners who adapt to a multicultural world by viewing society from a global perspective. Students will be educated through an approach emphasizing team participation in problem-solving projects based on real-world international situations. A rigorous academic curriculum will balance intellectual and experiential learning. This article seeks to show how this school is not only part of the school reform movement, but a “newform” of public education.

Over the past decade, a number of reformers have supported change in public education. A synthesis of sixteen of these reform studies points out the following:

- All children need a more rigorous education if they are to be economically competitive and politically responsible in our rapidly changing, diverse technological society.
- Research on effective schools calls for an orderly school environment, high expectations, continuous diagnosis and assessment of learning, and a school climate emphasizing academic achievement, shared goals, and a sense of community.
- Partnerships among universities, schools, businesses, and community organizations are recommended.
- There is a strong concern for English language proficiency in speaking, in listening, and in critical appreciation as well as in reading and writing. Coupled with this is a call for world civilization courses that stress global ethics as being crucial to citizens of an advanced society.
- In all subjects higher order skills and demonstrated student mastery are of top priority. Several proposals supplement or replace a listing of course requirements with outcome statements of student understanding or performance (Lake, 1984).

All in all, a tall task. A task that speaks more to systemic change than to merely reforming an inadequate system.

Creating a High School

In order to speak to these and other concerns in public secondary education, the International Polytechnic High School (I-Poly) was established. Over a three year period various constituent groups met to discuss a dream. This dream would try to take the best of what was known about successful teaching and learning and put it into practice on a university campus. The result became known as I-Poly.

I-Poly is a joint venture between the Los Angeles County Office of Education and California State Polytechnic University, Pomona (Cal Poly Pomona). Located on the campus of Cal Poly Pomona, I-Poly offers a stimulating and challenging interdisciplinary program that is internationally themed. Enrollment is presently at 220 students and will grow to approximately 400 by the 1997/1998 school year. The I-Poly student body is highly diverse (30% Hispanic, 30% White, 22% Asian, 18% African American as of 1995/1996), drawing on students from Los Angeles, Orange, San Bernardino, and Riverside Counties.

The current staff consists of a principal, teachers on loan from surrounding school districts, office personnel, and professors assigned to facilitate curriculum development. Other university professors are frequently involved in specific projects working directly with students. As a new freshperson class is brought in each year (the first class of 12 began in 1993), the faculty will expand in proportion to the student body. Teachers are selected based upon their commitment to curricular change. To support systemic public school reform, the model calls for teaching at I-Poly for one to four years and then return to support the internationalization and integration of curriculum at their home school. Student teachers are also assigned by the university who are both interested in, and committed to, innovation and change in public school classrooms.

Key Facets of the I-Poly Program

As previously mentioned, the school has an exceptionally diverse student body which mirrors Los Angeles and surrounding counties. It is international in focus with an interdisciplinary curriculum. It uses an inquiry-based approach to learning utilizing university personnel, computer laboratories, and the university library. It uses hands-on projects and student exhibitions with case study approaches to international topics and issues. Holistic assessment is used by instructors along with student self-assessment. Students belong to "houses" (groups of students that remain working together for the entire school year) that use a flexible block scheduling model much like that of a university. Teachers see themselves as facilitators rather than traditional instructors. Students must take ownership of their own learning process that includes a service learning component for graduation. There is an emphasis on problem solving and critical thinking in order to prepare globalists for the 21st Century.

In the broadest sense, I-Poly is a learning community which not only nurtures intellectual pursuit but provides students with a context and reasons for learning. All too often, the current approach to learning at the secondary school level focuses on students memorizing "important facts and figures," usually given by the instructor, a textbook, or both. This information is divided into disciplines for the convenience of the instructor, who is most likely to follow his/her lecture with a quiz, multiple-choice or true-false test, worksheet, "fill in the blank" sentences, *etc.* In this system, students are neither required nor encouraged to ask questions, since it is assumed that the instructor and the textbook possess the answers. One of the continuing rationales for this model is that it prepares students for university study.

In contrast, I-Poly students and teachers are engaged in a much deeper process, an "integration of the inner qualities of human life with the outer physical, social world...in order to achieve a balance between individuality and community, creativity and tradition, intuition and reason" (Miller, 1990, p. 59). One criticism often voiced by high school students is that school has little, or nothing, to do with the "real world." Through innovative, and sometimes provocative methodologies, I-Poly engages students and invites them to make connections between their lives and the lives of people in their school, communities, nation and the world. Moreover, I-Poly students are challenged to be, in Neil Postman's words, "...critical thinkers, so that they become men and women of independent mind, distanced from the conventional wisdom of their own time and with strength and skill enough to change what is wrong" (Postman, 1995, p. 60).

Curriculum Focus

Curriculum outcomes at I-Poly are focused on the following general areas:

- Communication skills and critical thinking
- Development of historical and social consciousness
- Multicultural/international understanding
- Understanding and appreciation of aesthetic experiences
- Understand and articulation of values
- Community service

The I-Poly curriculum serves as a hub for the intellectual activity of the school. Each year is based on a different geographical/historical theme:

- Year One/Latin America and the Pacific Rim
- Year Two/North American Studies
- Year Three/Europe and Russia
- Year Four/Africa and the Middle East

Multicultural/International Understanding

I-Poly students are seldom satisfied merely knowing that things happen—they want to know why. As students develop a global perspective on issues and events, they get closer to the “why” of things. They become prepared for a complex world where people engage each other through cooperation, competition, and conflict. According to the Center of War/Peace Studies, there are five important dimensions to the development of a global perspective:

Dimension 1: Perspective Consciousness – One’s individual view of the world is not universally shared...others have views of the world that are profoundly different from one’s own.

Dimension 2: State of the Planet Awareness – Students explore prevailing world conditions and developments, including emergent trends such as economic conditions, inter- and intra- nation conflicts, resources and health, migrations, environmental issues, *etc.*

Dimension 3: Cross-Cultural Awareness – Awareness of the diversity of ideas and practices to be found in human societies around the world, as well as within U.S. society. Also, how such ideas and practices compare and contrast, and how one’s own society might be viewed from other vantage points.

Dimension 4: Knowledge of Global Dynamics – Knowledge of key traits and mechanisms of global system (economic, ecological, political, technological, *etc.*) which directly impact how the world constantly changes. This approach produces deeper understanding of complex situation and helps students see their own roles in world events.

Dimension 5: Awareness of Human Choices – Heightened awareness of our own cultural perspective, of how others view the world, and of global dynamics and change, brings with it problem of choice. Individuals, societies, and countries are constantly solving problems and making choices. How one makes choices, and the results of those choices, are important elements in global education (Hanvey, 1978).

Working closely with Cal Poly professors, as well as other resources available in the Los Angeles area, I-Poly instructors have developed a course of study which provides these multiple global dimensions. Students become globalists through a variety of approaches

including research projects, discussion, studying languages and culture, and exhibitions of mastery.

The primary way in which I-Poly students develop into globalists is through the use of case studies. Case studies are actual, "real world" international scenarios and simulations which bring students directly into contact with complex issues and problems. Students engage in a process of analyzing multiple points of view and competing interests, during which they ask relevant questions, describe and explain issues and events, and eventually predict or prescribe an outcome. This process is challenging and stimulating in that students "inhabit the case," and cannot distance themselves from the realities and consequences as they might reading about events in a textbook (Lamy, 1995). Cases force students to think on their feet, eliciting their interpretations as to why things happen.

Case studies and the other aspects of global education prepare students for an increasingly dynamic, changing, and complex world, and help them see that as far as global issues are concerned, there is often more than one answer or point of view. Rather than simply include a unit on "diversity" or "multiculturalism," the I-Poly curriculum fulfills an "essential task of public schools, which is to find and promote large, inclusive narratives for all students to believe in" (Postman, 1995, p. 144). Engaged in a course of study which promotes true diversity of world views and opinions, I-Poly students develop tolerance towards, and an appreciation of, the breadth of humankind.

Interdisciplinary Research Projects and Exhibitions

Each semester has students involved in a research project (which gives them the necessary basic skills and knowledge required) and a demonstration project, where they must apply and demonstrate what they have been learning. These projects provide a forum for students to demonstrate mastery of important concepts and skills through the practical and creative application of those concepts and skills, rather than rote memorization and testing. The year one Latin American Research Project, for example, flows into a Latin American Restaurant project where groups of students research and design a restaurant based on one Latin American nation. The final form of most interdisciplinary projects is an exhibition. Exhibitions are special events at I-Poly, when the I-Poly community of scholars pulls together in a meaningful way. Exhibitions generally have three major components, including written, visual, and live presentation/demonstration. They may be group exhibitions, or individualized. Although components will vary from project to project, exhibitions afford students opportunities to both demonstrate and celebrate their knowledge and talents which have been characterized as "standards of intellect" (Sizer, 1985, p. 228). Further, "exhibitions drive the curriculum," (Sizer, 1992, p. 102) and interdisciplinary projects allow different types of students to complete the exhibition in different ways.

This curriculum was written and planned by the same team of teachers that implements it in class, creating a tremendous amount of "buy in" by the faculty. Utilizing key aspects of California's Model Curriculum Standards and Subject Matter Frameworks, this I-Poly course of study integrates these projects with language arts, mathematics, science, the social sciences, fine arts, foreign language, and physical education. The present interdisciplinary projects include:

Year One

- Latin American Research Project
- Latin American Restaurant Project
- Pacific Rim Research Project
- Pacific Rim Travelogue Project

Year Two

- Native American Research Project
- Industrial/Technological Exposition
- Immigration and Ethnicity Project
- Clean up Los Angeles Environmental Project

Year Three

- Western Civilization Aesthetics Exhibition
- Pathology and Disease Project
- The Individual and Society Law Project

Year Four

- Archeology/Anthropology Research Project
- Self-directed Senior Thesis

How Does It Work?

I-Poly was not developed as a magnet school. While students must apply to I-Poly, they need only have a minimum of a 2.0 grade point average in academic courses in order to be accepted. Other acceptance criteria include an application essay (stating why they wish to attend the school), two letters of recommendation from their previous school, and an interview with staff members. Energy level, artistic and linguistic creativity, divergent thinking, self-motivation, and enthusiasm for discovery are qualities sought in I-Poly students. These qualities are often evident in students whose grade point averages might be considered less than exemplary at other schools. Educators at I-Poly are interested in working with the whole student and not simply the part that processes and recalls volumes of information. I-Poly is meant to be a non-traditional school, founded by forward-minded individuals, concerned not only with reforming public schools but with providing “newforms” of educational experiences for secondary school learners.

I-Poly is currently located in three “portable” buildings on the Cal Poly Pomona campus. The university library, physical education, and computer laboratories are used throughout the day. The standard school day begins at 8:00 a.m., and ends at 3:00 p.m. Students are required to use the 3:00 p.m. to 5:00 p.m. time slot for tutoring, remediation, group project planning, community service, research in the university library, use of the Internet, and club meetings. Students are transported to and from school primarily by parents. There is no school bus. Some take public transportation with rides lasting up to two hours each way. Students make a definite commitment to be involved in the life of this school.

The I-Poly school day is longer than the traditional school day. However, the key difference between the traditional day and the I-Poly day is the way in which the day is divided. Currently I-Poly employs block scheduling to accommodate its students. Students are divided into houses. First year students, for example, could find themselves in North, South, East, or West house, based on their international themes. Each house stays together for the first half of the day, attending two blocks of classes which are 90 to 110 minutes each. Morning classes are not labeled by subject, but are simply referred to by the name of the teacher. Although each of the instructors has areas of expertise, each functions as a generalist and coach in working with students on their interdisciplinary projects. Each house will see each instructor twice per week, much like college classes. After lunch on Monday through Thursday, students alternate between foreign language and physical education blocks which are two hours long.

In keeping with the university’s commitment to both learning by doing and the integration of technology into the curriculum, all I-Poly students have E-mail accounts. They are instructed

in Cal Poly computer labs and have access to the Internet to support their project-based studies. Fridays are reserved for electives. Each instructor provides an elective course for students based on his/her personal likes and strengths. Thai and Swedish languages have been offered as electives, for example, based on the special interests of the teachers. Students have begun to take university classes that enhance their basic studies. During the 1995-1996 school year, students took classes as diverse as Chinese Language and Integrated General Education/Ways of Coexisting: Global and Urban Communities. Flexibility is an important aspect of the schedule. Time segments can be lengthened or shortened depending on the needs of the students and teachers.

Where Does The School Go From Here?

I-Poly is in the process of becoming. In recognition of the work I-Poly has done to date, the school has been accepted as a member of the Coalition of Essential Schools. This nationally recognized movement supports the kinds of innovation and commitment to change that mirrors I-Poly's philosophy. The 1996-1997 school year will see I-Poly's first graduating class. The challenges ahead are daunting but doable. The third and fourth year curriculum offerings/projects need to be completed and formalized. Accreditation issues need to be addressed and pursued. Narrative transcripts and portfolios need to be constructed that truly reflect student learning. Grant proposals have been written (and more are in the works) to support student international travel. Linkages must be established with colleges and universities so that the school and what it stands for is understood and accepted by the larger community. The college and university system, for example, is both asking for change from public schools and asking for the type of students being produced by I-Poly. They must now find vehicles for accepting these students, their unique skills, attitudes, and experiences. Time will tell, but those involved in this entire process are sincerely committed to this unique new form of public education.

References

- California State Department of Education, *Model Curriculum Standards: Grades 9-12* (Sacramento: State of California, 1985).
- Dewey, J., *John Dewey on Education, Selected Writings*, ed. Reginald D. Archambault (Chicago, IL: University of Chicago Press, 1964).
- Hanvey, R. G., *An Attainable Global Perspective* (New York, New York: Center for Global Perspectives, 1978).
- Kozol, J., *On Being A Teacher*. (Oxford: Oneworld Publications, Ltd., 1993).
- Lake, S., *The Educator's Digest of Reform: A Comparison of 16 Recent Proposals For Improving America's Schools*. (San Mateo County Office of Education, 1984).
- Lamy, S. L., *Worldviews and International Relations Theory* (Dubuque: Kendall/Hunt Publishing, 1995).
- Miller, R., *What Are Schools For? Holistic Education In American Culture* (Brandon: Holistic Education Press, 1990).
- Postman, N., *The End of Education, Redefining The Value of School* (New York: Alfred A. Knopf, 1995).
- Sizer, T. R., *Horace's Compromise, The Dilemma of the American High School* (Boston: Houghton Mifflin Co., 1985).
- Sizer, T. R., *Horace's School, Redesigning the American High School* (Boston: Houghton Mifflin Co., 1992).

