

**The Murdoch Center
for
Advanced Media in Education
at
Columbia University**

Emerging communications forces are making a deep, lasting transformation of education both feasible and necessary. The **Murdoch Center for Advanced Media in Education at Columbia University** will assert leadership in fulfilling these possibilities.

To accomplish this mission, the Murdoch Center will integrate technological innovations into a practical process of education, create fresh models of educational excellence and professional development, and demonstrate to students, parents, and the public how the new educational process meets their needs and interests more effectively than does the status quo.

As an enabling strategy, the Murdoch Center will undertake a program of specific initiatives to improve dramatically the educational experience of more than 100,000 disadvantaged children by connecting to the information superhighway 200 urban schools — public, parochial and private. This enabling strategy will begin to show how new technologies can lead to better education by:

- overcoming the traditional isolation of students, teachers, and schools;
- expanding the opportunity to develop skills for the 21st century work and civic life;
- helping children build a fuller sense of efficacy and personal empowerment;
- strengthening schools as centers of communication, helping coordinate initiatives in education, health, housing, employment, and community development; and
- combining the resources of a global communications enterprise and a leading research university to improve the educational opportunities of those most in need.

Through a five-part strategy, listed here and described on following pages, the Murdoch Center will empower children, teachers, and schools with advanced multimedia information networks.

- 1) **Connectivity** will provide school gateways linking to the Internet via broadband networks.
- 2) **Technical assistance** will insure that schools affiliated with the Murdoch Center can take full advantage of its innovative resources.
- 3) **Curriculum integration** will engage children with the questions, ideas, and principles that inform advanced scholarship and professional practice.
- 4) **Teacher development**, on-site through video conferencing and at Columbia through the Murdoch Fellows Program, will enable teachers to make full use of new educational resources.
- 5) **Assessment** will evaluate how well young people study with advanced media and prepare the basis for a second phase of work by the Murdoch Center.

The following table shows the estimated costs to implement this strategy, including both the enabling activities that provide the basic connectivity and technical assistance, and the Murdoch Center's substantive educative work with students, teachers, and schools. During the fourth year, the News Corporation, Teachers College, and Columbia University will decide on arrangements for extending work of the Murdoch Center into the 21st Century.

Designing the School of the 21st Century

Educators have a rare, historic opportunity to extend the limits of educational possibility. The ***Murdoch Center for Advanced Media in Education at Columbia University*** will provide decisive leadership in the effort to seize that opportunity.

Technologies, particularly multimedia and digital networks, can enable people to change education profoundly. These technologies alter the methods and economics governing how people produce, disseminate, and use knowledge. These changes in turn affect the curriculum: what is taught, how students gain access to it, and what human achievements result.

Reshaping the curriculum through digital communications has enormous potential for advancing both intellectual excellence and democratic equity. These are the goals of the proposed Murdoch Center, a unique collaboration of the innovative capacities of Columbia University, Teachers College, and the News Corporation.

High-speed networks can deliver, to any person at any place at any time, digital curricular materials that integrate multiple forms of knowledge (i.e. audio, video, imagery, simulations and sophisticated tools of analysis and synthesis) in addition to traditional text. Networks provide not only access to curricular materials, but also the means to enable students and teachers at the classroom level to communicate with the world at large, thereby breaking out of their traditional isolation. In short, the world of culture becomes a significant part of each class; and creative contribution to that culture by students and teachers themselves becomes a possibility in every educational encounter. High-speed networks can unite the library and the classroom, and open the tools and the data of advanced research to curious inquiry by all, creating a rich, high-quality environment of educational resources that empowers teachers and students to take on new and liberating roles.

The Murdoch Center

The mission of the Murdoch Center is a compelling one — to take leadership in transforming education through information technology. This goal is feasible, but reaching it requires the capacity to act on a scale commensurate with it. Through the Murdoch Center, Columbia University and the News Corporation can combine substantial resources and a bold intent to create a positive, progressive force with highly visible, lasting consequences for education.

Advanced media have great educational significance because they enable students to master a fuller, more powerful curriculum. The Murdoch Center for Advanced Media in Education will advance these possibilities by drawing creatively on the talents and intellectual property base of both the News Corporation and Columbia University. Work will combine existing projects of the Institute for Learning Technologies, Teachers College, and Columbia University with the numerous educational emphases being developed through Delphi, Scott Foresman and HarperCollins, along with many varied resources added daily by others through the Internet.

Digital networks and distributed computing create opportunities for major efficiencies in educational development. The Center will make use of the extensive investments in technology for education made by many state governments and by major federal agencies such as the National Science Foundation, NASA, and the Department of Education. It will mobilize tools to allow schools, classes, and groups of students to assemble and control their own contributions to the structures of networked information and knowledge. Such tools, based on designs such as Mosaic and the World Wide Web and their successors, will enhance the ability of teachers, parents, and students to find and selectively filter information; to control, assess, and present their findings and ideas; and to communicate with peers and experts about their interests and concerns.

A Five-Part Strategy

To pursue its goals, the Murdoch Center will execute a five-part program of practice to provide extensive direct service to children in urban centers around the nation.

Connectivity. Goals of school change and curriculum innovation will become feasible as children, teachers, and schools gain easy, affordable access to the digital infrastructure. The Murdoch Center will undertake to connect 200 schools in major cities to the information highway through high-speed connections to the Internet. These connections will direct educational innovation to where the need is poignant and to where results will be prominent. Associated efforts to build the technical infrastructure within participating schools will provide an unmatched base for showing how advanced multimedia information networks can provide the means to effect educational change. Over 100,000 disadvantaged children will immediately benefit and become a beacon for further reform.

Technical Assistance. To insure that schools affiliated with the Murdoch Center can adapt to the new technologies and take advantage of access to innovative curricular materials, the Murdoch Center will provide direct technical assistance during the period of initial connectivity. In the longer term, the Murdoch Center will pioneer the use of wide-area network communication capabilities, such as cell-relay video conferencing, to develop and deliver technical support directly to the schools over the network. Expertise gained in this process will be invaluable in extending network services to schools far beyond through a provider such as Delphi.

Curriculum Integration. Many groups are creating powerful curricular innovations. The Murdoch Center will concentrate on bringing all these new materials from diverse sources creatively into working classrooms, combining resources developed at Columbia University and the News Corporation, along with materials available from others, whether on disk or over the Internet, to integrate everything into the daily work of schools. The Center will work to combine the best resources it can find, the better to educate the developing child. It will implement, test, and perfect that configuration of means, providing proven new models for dissemination to the world.

These efforts at curriculum integration will concentrate, substantially, but not exclusively, on the middle school and high school. Traditional compensatory education in disadvantaged areas has centered attention on the early grades. This is good, but not sufficient. To capitalize on the power of advanced media in education, the Murdoch Center will address the needs of children as they approach adolescence and grow into adults. These are the years in which students appropriate high levels of working skill and substantive knowledge, given the chance. Too often, these are the years when schools fail because they lack sufficient resources to satisfy growing curiosities, losing the attention of all-too-many students. These are the years in which networked multimedia can make a sharp, significant difference for young people who are at the emotional border between alienation and engagement. These are the years when digital educational tools can give students a perception that the agencies of action, so powerful in the world about them, are indeed within their personal reach. These are the years when the current system fails and when a better system must succeed.

Teacher Development. Successful educational reforms, especially ones combining a new pedagogy with mastery of new technological tools, requires a concurrent program of teacher training, professional development, and in-school teacher support. Prevailing modes of teacher preparation are poorly adapted to technologically dynamic practices. The Murdoch Center and Teachers College will develop and implement a scaleable model of teacher training and in-school professional development support, building on the pioneering initiatives such as the Living Textbook Project and the Harlem Environmental Access Project, two publicly funded efforts at Columbia to develop wide-area networks as agents of school change.

As a first step, Teachers College will create a fellowship program for master teachers from the Murdoch Center affiliated schools. These Murdoch Fellows will come together to study how students and teachers can best make use of network resources and tools. Upon completion of their studies, Murdoch Fellows will effectively extend the Murdoch Center, returning to their local schools able to teach others how to take full advantage of these materials and technologies.

Murdoch Fellows, upon their return to the local schools, will continue to participate in Murdoch Center activities and will be able to call on experts at the Center and elsewhere at Columbia University through the innovative use of electronic mail, discussion groups and network video conferencing. Returning Fellows will themselves become part of an expanding pool of resources available not just within their own school but to all the other affiliated schools through the network. The whole effort of teacher development will provide a model for general practice, amplifying the results of the Murdoch Center through adoption into general practice.

Assessment. Fundamental to successful innovation and the continued commitment of resources is the assessment of curriculum performance and student achievement. When deep educational changes occur, traditional assessment strategies cease to work. These strategies have assumed that what students should know is predictable and assessment of students turns on measuring how well they conform to those predicted expectations. Meanwhile, the evaluation of curricula turns on measuring the relative efficiency with which students reach base-lines of canonical knowledge. With the new emerging curricula, the key matter will no longer be what students know, but what they can *do* with intellectual material.

The Murdoch Center will develop assessment procedures to reflect these changes and use them to demonstrate what arrangements ensure good practice with advanced media in education. To achieve systemic change in education, however, specific efforts at improving practice need to produce measurable, positive effects under traditional criteria as well. The Center will work with students, teachers, and schools to ensure validation of its efforts, both pedagogically and politically, at the same time that it seeks to transform assessment methods. In this way, the Murdoch Center can become the locus of sustained innovation, reshaping the process of education and creating a national, even global market for those providing innovative resources and services within it.

Columbia University and News Corporation.

A program whose ultimate goal is to reshape the process of education is ambitious but not impossible. In some ways, it is not unlike the creation of a new television network. Arguments that school bureaucracy and structural impediments will destroy the educational effort are like the assertions that the existing structure of network affiliates and traditional audience loyalties would prevent the emergence of a fourth network. The experience of the Fox Television Network provides a compelling model for a comprehensive reform effort built on incremental steps Ñ identify an underserved or segmentable market, develop a strategy for comprehensive change, and execute clearly defined incremental steps that can be evaluated and assessed before moving on to the next step.

A good model makes it feasible to overcome impediments to educational innovation, provided one has the capacity to act in a sustained effort on a large scale. The Murdoch Center will bring together substantial, enduring enterprises, ones capable of long-term, compelling action.

Teachers College is the oldest, most comprehensive graduate school of education in the world. It has a long tradition of innovation in education and service to disadvantaged communities. Columbia University is distinguished among leading research universities as a leader in education through its influence in developing the core curriculum. The Institute for Learning Technologies has advanced a full vision of how to reshape the

process of education through innovative uses of information technology, particularly, multimedia and network technologies and is a national leader in applying these technologies in working schools.

The News Corporation — through its Technology Group — is rapidly emerging as a leader in the development of new media applications in a variety of industries from broadcasting (Fox Interactive) to publishing (HarperCollins New Media) and on-line services (Delphi). In addition, News Corporation brings a strong experience base with content development and information branding, as well as with the editorial and publishing process.

Institutions seeking to influence change incur historical responsibility for the consequences of their actions. Working together through the Murdoch Center, Columbia University and News Corporation have the potential to effect significant educational change; the potential to make innovations that will stand the test of time as a model for an effective information-based society, one that people will experience as both empowering and equitable.

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