



**Yale-New Haven
Teachers Institute**

**Annual Report
2003**

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The Yale-New Haven Teachers Institute is an educational partnership between Yale University and the New Haven Public Schools designed to strengthen teaching and learning in local schools and, by example, in schools across the country. Through the Institute, Yale faculty members and school teachers work together in a collegial relationship. The Institute is also an inter-school and interdisciplinary forum for teachers to collaborate on new curricula. Each participating teacher becomes an Institute Fellow and prepares a curriculum unit to be taught the following year. Teachers have primary responsibility for identifying the subjects the Institute addresses.

Since its inception in 1978, the Institute has been recognized repeatedly as a pioneering and successful model of university-school collaboration; in 1990 it became the first program of its type to be permanently established as a function of a university. In 1998 the Institute launched a National Demonstration Project to show that the approach it had taken for twenty years in New Haven could be tailored to establish similar university-school partnerships under different circumstances in other cities. Based on the success of that Project, in 2004 it announced the Yale National Initiative to strengthen teaching in public schools, which aims to establish Teachers Institutes in states throughout the country.

For information about the Institute model, the National Initiative, or opportunities to support the Institute's Endowment, please contact:

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HIGHLIGHTS OF THE REPORT

Introduction

During 2003 the Yale-New Haven Teachers Institute continued its New Haven program for the twenty-sixth year while preparing for the Yale National Initiative to strengthen teaching in public schools, a long-term effort to establish up to 45 new Teachers Institutes throughout the United States.

From its beginning in 1978, the overall purpose of the Yale-New Haven Teachers Institute has been to strengthen teaching and learning in local schools and, by example, in schools across the country. New Haven represents a microcosm of urban public education in the United States. Eighty-five percent of the students in the New Haven Public Schools are African American or Hispanic, and two thirds (67 percent) of the district's students are eligible for the free or reduced-price lunch program. The Institute places equal emphasis on teachers' increasing their knowledge of a subject and on their developing teaching strategies that will be effective with their students.

At the core of the program is a series of seminars on subjects in the humanities and the sciences. Topics are suggested by the teachers based on

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what they think could enrich their classroom instruction. In the seminars, Yale faculty contribute their knowledge of a subject, while the New Haven teachers contribute their expertise in elementary and secondary school pedagogy, their understanding of the students they teach, and their grasp of what works in the crucible of the classroom. Successful completion of a seminar requires that, with guidance from the Yale faculty member, the teachers each write a curriculum unit to be used in their own classroom and to be shared with others. Meetings in school, often through the Institute Centers for Curriculum and Professional Development, enable the curriculum units to be shared at the same educational site. Both print and electronic publication make them available for use or adaptation by other teachers in New Haven, and by teachers, students, educational leaders, and the wider public throughout this nation and indeed the world.

Teachers are treated as colleagues throughout the seminar process. Unlike conventional university or professional development courses, Institute seminars involve at their very center an exchange of ideas among teachers and Yale faculty members. This is noteworthy since the teachers admitted to seminars are not a highly selective group, but rather a cross-section of teachers in the system, most of whom, like their urban counterparts across the country, did not major in one or more of the subjects they teach. The Institute's approach assumes that urban public school teachers can engage in serious study of the field and can devise appropriate and effective curricula based on this study.

Through 2003, the Yale-New Haven Teachers Institute has offered 160 seminars to 557 individual teachers, many of whom have participated for more than one year. (Please see Appendix for a list of the Fellows.) The seminars, meeting over a five-month period, combine the reading and discussion of selected texts (and often the study of selected objects and aspects of the local environment) with the writing of the curriculum units. Thus far, the teachers have created 1438 curriculum units. Over the years, a total of 83 Yale faculty members have participated in the Institute by giving one or more seminars. (Please see Appendix.) Of them, 57 have also given talks. Forty other Yale faculty members have also given talks. At this date about half of these 123 participants are current or recently retired members of the faculty.

The Institute's twentieth year, 1997, had brought to a climax a period of intensive development of the local program. That had included placing all Institute resources on-line, providing computer assistance to the Fellows, correlating Institute-developed curriculum units with new school-district academic standards, establishing Institute Centers for Curriculum and Professional Development in the schools, and establishing summer Academies for New Haven students. In that year, while continuing to deepen its work in New Haven, the Institute began a major effort to demonstrate the efficacy of its approach in other cities across the country.

This effort involved in 1998 the planning stage of a National Demonstration Project, supported by the DeWitt Wallace-Reader's Digest Fund (now the Wallace Foundation) and a supplementary grant from the McCune Charitable Foundation. In 1999 partnerships were established between colleges or universities and school districts at four sites that planned to adapt Institute's approach to local needs and resources. Implementation grants were awarded to four new Teachers Institutes—in Pittsburgh (Chatham College and Carnegie Mellon University), Houston (University of Houston), Albuquerque (University of New Mexico), and Santa Ana (University of California at Irvine). These grants enabled them to work with the Yale-New Haven Teachers Institute for a period of three years, from 1999 through 2001.

In 2003 the Institute's work on the national level was notably assisted by an extension of the support for the National Demonstration Project by the Wallace Foundation and a grant for 2002-2003 by the Jessie Ball duPont Fund. This support enabled the two-year Preparation Phase of the Yale National Initiative to be brought to completion. The Preparation Phase included Research and Planning Grants for the Pittsburgh Teachers Institute and the Houston Teachers Institute, which have significantly contributed to the evaluation of the Teachers Institute approach. The Preparation Phase enabled the Yale-New Haven Teachers Institute to collate and analyze data from the questionnaires and surveys conducted during the National Demonstration Project, establish a Web site for the Yale National Initiative, and prepare the "Understandings" and "Necessary Procedures" that serve as basis for membership in a new League of Teachers Institutes. Finally, the Preparation Phase made possible a summary evaluation of the National Demonstration Project by Rogers M. Smith and other researchers at the University of Pennsylvania.

The two major sections of this report therefore describe the two complementary areas of activity undertaken by the Yale-New Haven Teachers Institute in 2003. Between these major sections we have placed a briefer section on the Institute Web site, which served both the local and national programs before the launch of an additional site specifically for the Yale National Initiative in 2004.

The Program in New Haven

This section of the report covers the offerings, organization, and operation of the Institute's 2003 program for the New Haven teachers who participated as Fellows. It draws extensively upon the evaluations written by Fellows and seminar leaders at the conclusion of their participation.

The report here documents the sustaining of teacher interest in Institute seminars, as well as the content of the seminars that have been offered, the application and admissions process, the participants' experience in the program, and the preparation for 2004 offerings. With respect to long-range planning and program development, it describes the maintaining of Institute

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Centers for Curriculum and Professional Development in the schools, and the online publication of Reference Lists that show the relationship of many Institute-developed curriculum units to school curricula and academic standards. It sets forth the structure and activities of the local advisory groups; and it outlines the process of local documentation and evaluation.

We hope that this section of the report will be of interest to all those who assist in supporting, maintaining, and expanding the program in New Haven. We hope that its account of our local procedures may continue to prove useful to those who have established new Teachers Institutes, and to those at other sites who are contemplating the establishment of such Institutes.

The Institute Web Site

The Web site of the Yale-New Haven Teachers Institute makes available electronic versions of the Institute's publications-including the volumes of curriculum units and essays and other materials concerning the Institute's work. (The address is <http://www.yale.edu/ynhti/>.) The Web site is important for New Haven teachers; it played an important role during the National Demonstration Project; and it has assumed further importance as the Yale National Initiative proceeds. The Web location has been advertised prominently on the cover of *On Common Ground*, which contains articles regarding school-university partnerships and is intended for a national audience. The Web site of the Yale-New Haven Teachers Institute may also now be accessed through the Web site of the Yale National Initiative, the address for which is <http://teachers.yale.edu>.

The Institute has created a "guestbook" on its Web site, in order to invite comments and suggestions. (The Web site for the Yale National Initiative also invites comments on individual curriculum units.) In recent years the site has been used by more and more people in many parts of this country and abroad-teachers from both public and private schools (including Fellows from other Teachers Institutes in the National Demonstration Project and the Yale National Initiative), school and university administrators, parents, volunteers, university professors, high school students, graduate students, librarians, military personnel, home schoolers, local policy-makers, and others conducting research or having an interest in education. We estimate that from its inauguration in June 1998 through December 2003, approximately 3,000,000 persons have visited the Web site, 800,000 of them during 2003, when the site registered more than 5.4 million "hits."

The Yale National Initiative

This section of the report sets forth the aims of the Yale National Initiative and its grounding in the accomplishments of the National Demonstration Project. It describes the process and the accomplishments of the Preparation Phase of the Yale National Initiative. It then provides a report on the documentation and the multiple evaluations of the National Demonstration Project and the Yale National Initiative.

This section then describes the League of Teachers Institutes established by this Initiative and provides summaries of the recent work of the Institutes that have joined the League: the Pittsburgh Teachers Institute and the Houston Teachers Institute. It then sets forth the modes of communication and dissemination that are supported by the League (including the new Web site of the Initiative), and suggests the means whereby Teachers Institutes may expand and achieve systemic impact. It concludes by describing how new Institutes may become members of the League or may become affiliated with it.

Financial Plans

A final section of the report sets forth the current financial planning with respect to both the New Haven program and the next phases of the Yale National Initiative.

THE PROGRAM IN NEW HAVEN

The Seminars and Curriculum Units

From its inception, a tenet of the Institute's approach has been to determine its offerings annually in response to the needs for further preparation and curriculum development that the teachers themselves identify. In 2003 this process, as described later in the report, resulted in the mounting of five seminars, three in the humanities and two in the sciences.

The seminars were assisted by a contribution from the New Haven Public Schools. With major support from endowment revenues the Institute offered the following three seminars in the humanities:

"Geography through Film and Literature,"

led by Dudley Andrew, Professor of Comparative Literature and of Film Studies

"Everyday Life in Early America,"

led by John P. Demos, Samuel Knight Professor of American History and
Professor of American Studies

"Poems on Pictures, Places, and People,"

led by Paul H. Fry, William Lampson Professor of English

With support from the Sherman Fairchild Foundation and funds from the Howard Hughes Medical Institute grant to Yale the Institute offered the following two seminars in the sciences:

"Physics in Everyday Life,"

led by Daniel E. Prober, Professor of Applied Physics and Physics

"Water in the 21st Century,"

led by John P. Wargo, Professor of Environmental Risk Analysis and Policy

The following overview of the work in the seminars is based on the descriptions circulated in advance by the seminar leaders, the *Guide to Curriculum Units, 2003*, and the curriculum units themselves. Each Fellow has prepared a curriculum unit that she or he will use in a specific classroom. Each Fellow also has been asked to indicate the subjects and grade levels for which other teachers might find the curriculum unit to be appropriate.

Geography through Film and Literature

This seminar assumed that students of all ages have been studying (or absorbing) geography most of their lives. They have been watching a great many films and reading some novels which, whether they know it or not, convey

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ideas and impressions of what the world elsewhere looks like, physically, socially, and culturally. First, the seminar examined a couple of American films to see how they represent the world as well as to imagine how peoples elsewhere experience "our" films. Then the group looked at films—and certain works of literature—made abroad so as to experience how other people imagine the world.

Since cinema is not widely studied for itself in grades K-12, this seminar anticipated and attracted a mix of teachers of geography, literature, history, and social studies. While many of the films were pitched at a mature audience, teachers of students at the elementary and middle as well as at the high school level were able to use the films to grasp and wrestle with the pedagogical, social, and artistic issues involved. With the seminar leader's help, these teachers then planned a different set of films appropriate to the grade level with which they work.

In first exploring mainstream films set abroad, the seminar practiced some rudiments of film analysis, with questions including: How is the foreign portrayed? How is language used? How might these films look from the perspective of those living in the areas portrayed? Questions on the film industry included: How do Hollywood-financed films entertain the world? How does global distribution work? Does the *film-globe* put Hollywood as the prime meridian? In successive weeks the issues that the seminar addressed concerned: film and nation (Japan); recovering one's space (Africa); cultural space (how a culture portrays its homeland, Ireland); landscape films versus urban films (mainland China, Brazil); and how children orient themselves in space (Iran).

The seminar looked at films—and literature—made abroad so as to experience how other people imagine the world.



The seminar on "Geography through Film and Literature." (Clockwise from bottom left: Fellows James P. Brochin, Giovanna M. Cucciniello, Nehemia Levin, Sandra K. Friday, seminar leader Dudley Andrew, and Fellows Waltrina D. Kirkland-Mullins and Angelo J. Pompano.)

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In all cases the participants investigated how films build upon or alter traditions of art (especially theater, painting, the novel). The group read some literary works to gauge how different narrative forms treat geography. Titles ranged from Chinua Achebe's *Things Fall Apart*, Mariama Ba's *So Long a Letter*, and Sembene Ousmane's *God's Bits of Wood* from West Africa, to John Keane's play *The Field* and James Joyce's story "The Dead" from Ireland. Fellows considered the way that the larger world is implicitly mapped in films and literature.

Weekly seminar discussions focused on the films participants saw together from a given region (West Africa, Ireland, China, Iran, Australia). The group used films' cues to learn about the social and geographical features of a chosen part of the world, as well as information about the national cinema. Mainly the seminar sought to elaborate the kind of concerns, features, values, and resources the films addressed, comparing these to parallel aspects of American life and Hollywood films. The literary heritage of some of the regions made the distinctiveness of the films easier to comprehend (for example, William Butler Yeats' poems celebrating the landscape and sprites of western Ireland are context for films like *Into the West* and *The Secret of Roan Inish*).

Participants used films' cues to learn about the social and geographical features of a chosen part of the world.

Participants launched their own examination of various aspects of film as it relates to geography and history, building what the seminar leader called an "impressive set of teaching units." Some of these examined features of social life in a given region. Kristin Carolla used the movies mentioned above, among others, to help students understand Irish culture. David DeNaples conceived of the continent of Africa as a group of regions with distinct climates, economies, and social organizations while discussing colonialism and its aftermath. Sean Griffin developed an exploratory adventure for his students: a study of the places along the Trans-Siberian railway, with "stops" along the way allowing students to acquaint themselves with the history, literary classics and famous architecture of key cities. Crecia Cipriano's unit emphasizes the breadth of Francophone cultures from West Africa, to Madagascar, to the Caribbean to Quebec, and alludes to Southeast Asia as well. Waltrina Kirkland-Mullins, working with early grades, emphasized the narrative traditions in several distinct places: West Africa, France, Eastern Europe; branching out from the films of the stories, she prepared materials and planned activities to immerse students in the world and world view of children abroad who are at once very like them and yet whose daily lives are different.

All of the units produced by the Fellows took advantage of the opportunities afforded by the subject matter of world films and geography to introduce sophisticated notions of diversity and commonality in the human experience. A couple of the units, besides that of Waltrina Kirkland-Mullins, made diversity the focus of their units. Sandra Friday, looking to introduce a broader world to her students and to portray the distinction between place and space, asks them to move concentrically out from their homes and neighborhoods, to the city of New Haven, to the New York City orbit, and then to the wider

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world. Giovanna Cucciniello, who works with children recently arrived from non-Anglophone countries, goes directly after the goal that all the Fellows shared, that of making the students in her class comfortable with themselves, intrigued by their heritage, and prepared to treat other children with these same feelings of comfort, intrigue, and pride. Evelyn Lawhorn's catchword is "scale," the manipulation of which allows her to bring together science, mathematics, geology, anthropology, history, as well as geography.

Two other units situate cinema and geography within a historical framework. Nehemia Levin employs films such as *Schindler's List* and *The Pianist* to initiate an inquiry into the origins of anti-Semitism, beginning as far back as Russia in the late 18th century. James Brochin's unit deploys several notable films to make students aware of the importance and fragility of their freedoms, specifically the freedom from aggressive interrogation that has terrorized peoples in the past, from the ordeal of Joan of Arc to the Inquisitions, the Salem witch trials and McCarthyism.

Finally, Angelo Pompano plans to have his students produce a filmed geography of their own environment, the middle school where he teaches and where they spend so much of their lives; his unit adopts the genre of artistic documentary films known as "City Symphonies" to display the "ecology" of a public school.

Everyday Life in Early America

This seminar was designed to present and explore a variety of themes related to everyday experience in the premodern period of American history, before the Industrial Revolution. The sequence of topics moved week-by-week from the general to the particular, and from the structural to the personal.

After an introductory session in which the participants considered questions of evidence and inference in historical work, the seminar addressed the environment encountered by the first European settlers of North America, and their developing interaction with it. At the same time, the group contrasted European patterns with prevalent Native practice in this respect. Next, the seminar took up issues of demographic history, including the catastrophic experience of Native groups in the face of foreign disease pathogens, and the growth of an increasingly diverse—indeed multiethnic and multiracial—population throughout the British colonies.

Then they turned to questions of politics and society, broadly understood: the characteristically premodern, consensus approach to governance (so different from our own), the extent and use of voting rights, the role and responsibilities of leadership, the widespread acceptance of class-based hierarchies, the development nonetheless of social mobility, and the tensions confronting traditional community models when situated in a new context. This led directly to the next topic—the "moral economy" of premodern times, and attendant

After considering questions of evidence and inference in historical work, the seminar addressed the environment encountered by the first European settlers of North America, and their developing interaction with it.

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factors of labor scarcity, subsistence as well as cash-crop production, and the faint, first stirrings of capitalism. The seminar concluded the more "structural" part of its agenda by investigating the prevalent cultural system, including literacy and print communication, information networks, education, and the centrality of face-to-face encounters.

Remaining sessions were devoted to more "personal" aspects of premodern history—to individuals' experiences within the structure of society. For example, participants examined the circular dimension of work and family (geared, as virtually all of it was, to the daily cycle, the seasonal cycle, and the life cycle). The group then turned in a direct way to questions of race and gender. The seminar considered, in particular, the forced introduction of African-American laborers (and their subsequent enslavement), and the step-by-step accommodation of Native groups to British (and European) dominance. Participants also explored the experience of early American women within an everyday regime of "flexible patriarchy." A concluding topic was cosmology—the ways in which early Americans sought to make sense of their world (including religion and magic, witchcraft and Providence, and various forms of practical knowledge).

Readings comprised both secondary and primary sources; the latter included material artifacts brought both by the seminar leader and by the Fellows. The leader did some informal lecturing, leaving ample time for discussion.

From the beginning, the Fellows were at work on their individual curriculum units. As the seminar proceeded, these were shared with the entire



Michael Marsland

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The seminar on "Everyday Life in Early America." (Left to right: Seminar leader John P. Demos and Fellows Thomas P. O'Connor, Sheila Wade, Malini Prabakar, and Barbara K. Smith.)

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group. Topics ultimately addressed in these units were diverse. Stephen Broker's unit examines death and dying in Puritan New England through a focus on gravestones in Cape Cod, Massachusetts, where he has conducted substantial original research; this interdisciplinary unit is designed for high school courses in anatomy and physiology and Advanced Placement environmental science. Jameka Sayles, who teaches at an arts magnet middle school, explores early childhood in the New England colonies, including education, recreation, health and home life. Home skills in early America, including cooking, are the focus of Barbara Smith's unit that integrates social history and home economics. Native American women of the East Coast are the subject of Malini Prabakar's unit for fifth graders; she has objectives for students' language arts, social studies, and social development. A staff developer at an elementary school where 80 percent of the students are native speakers of Spanish, Erica Forti takes up the cultural practices of the Plains Indians of the West. Lorna Edwards, who is a colleague of Jameka Sayles, examines African Americans' experiences of slavery, with the aim of involving other teachers at their arts magnet school. And two units, by Thomas O'Connor and Sheila Wade, evoke the early history of New Haven. O'Connor aims to teach his high school students about local history in the 17th and 18th centuries, while Wade's unit is directed at a middle-school audience and focuses on England, the colonies, and New Haven in the 17th century.

Poems on Pictures, Places, and People

Participants in this seminar studied poems on the topics of its title in roughly that sequence, supplemented by poems suggested by the Fellows. After introductory sections on the definition, overall history, and technical aspects of poetry, the group devoted one meeting entirely to children's poetry from the eighteenth to early twentieth centuries chiefly selected from *The Oxford Book of Children's Verse*. The seminar continued with three weeks each devoted to traditional and contemporary poems on pictures and other art objects (ecphrastic poems), on places (or the sense of place), and on people (and animals or other things or ideas speaking or addressed as people). These categories allowed consideration of broad themes, including: the orientation of poetry to other modes of expression; the orientation of poetry to the surrounding world; the orientation of poetry, as voiced utterance, to its audience and to social themes. As occasion arose, participants discussed the genres and forms of poetry. During the last two sessions, the group discussed additional poems brought in by Fellows and returned to a list of technical terms that the seminar leader had distributed at the outset.

Participants considered ways of reading and understanding poetry, as well as technical terms such as metaphor, alliteration, and personification.

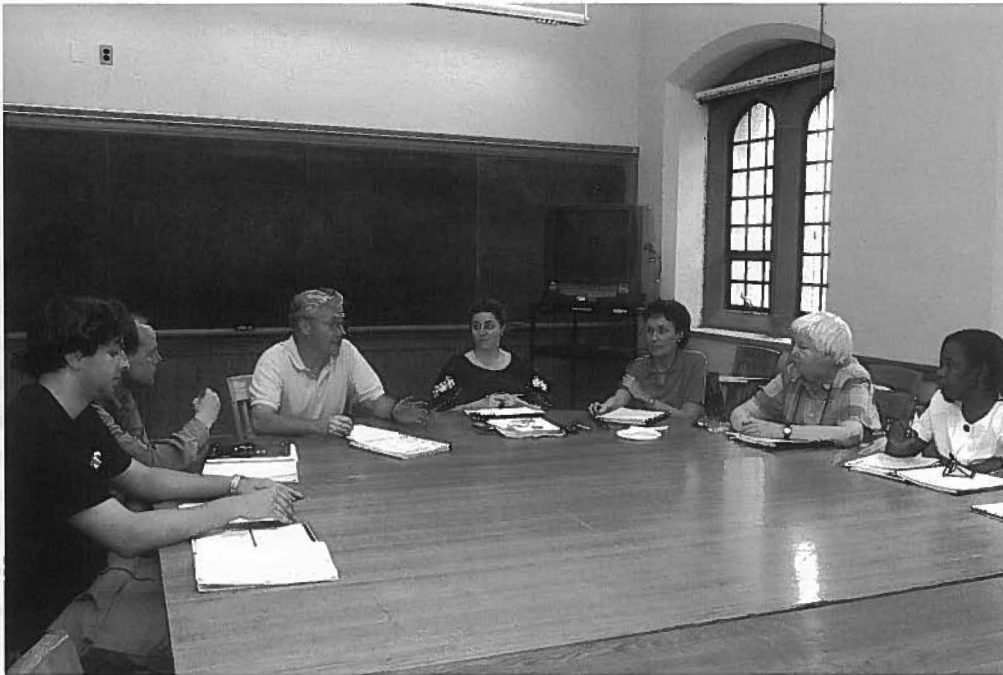
Participants considered ways of reading and understanding poetry, as well as technical terms such as metaphor, alliteration, and personification. Still, Fellows' main concern from the beginning was the practical business of preparing material that would be suitable for their students and their state-mandated teaching objectives. From the time the first drafts were submitted, the seminar reserved substantial time for the presentation by each Fellow of his

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or her unit material. The seminar leader commented that "the degree of cooperation, mutual interest, and constructive suggestion among the Fellows was truly remarkable" during this component of their sessions.

The resulting volume of curriculum units, *Teaching Poetry in the Primary and Secondary Schools*, includes the work of a team from Beecher Elementary School as well as other curricula for students at the elementary, middle, and high school levels. Using voice puppets to animate the material, Geraldine Martin presents a unit for first graders on the poems of Jack Prelutsky. Beecher music teacher Thomas Sullivan uses a sequence of Mother Goose rhymes to introduce the rudiments of musical understanding to third graders. Jean Sutherland, who completes the Beecher Team, offers a unit on Shel Silverstein for slightly older students, emphasizing not only the poetry but the books of prose and illustration; she shows how one poem can be adapted to a variety of teaching purposes.

Other participants developed work for students ranging from third grade to high school. Christine Elmore's unit examines three women who write children's poetry—Karla Kuskin, Valerie Worth, and Patricia Hubbell—and teachers may find her references to the secondary literature on teaching the reading and writing of children's poetry especially helpful. Zoila Brown teaches fifth grade in an arts magnet school environment that emphasizes teaching across the curriculum, and accordingly her unit emphasizes potential connections among poetry and science, history, social studies, and performance. Amber Stolz, teaching in a small high school that emphasizes character development, calls students' attention to the work of Maya Angelou, a complex role model.



Michael Marsland

"The degree of cooperation, mutual interest, and constructive suggestion among the Fellows was truly remarkable."

—Seminar Leader

The seminar on "Poems on Pictures, Places, and People." (Left to right: Fellows David N. Reynolds, Thomas D. Sullivan, seminar leader Paul H. Fry, and Fellows Dina K. Secchiaroli, Geraldine M. Martin, Jean E. Sutherland, and Zoila M. Brown.)

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Mindi Englart's unit on teaching rap music to grades 9-12 emphasizes positive, socially constructive lyrics, without overlooking the socially aggressive side of rap (giving advice on how to approach the raw language and violence), and connects this form with other traditions of dissonant poetry. Susan Santovasi's unit for grades 11-12 concerns poems of protest and political commentary, focusing especially on reactions to war, from the Revolutionary War to Vietnam and the Gulf Wars. Finally, Dina Secchiaroli—preparing her students for the Advanced Placement exams—developed a unit modeling how this might be done, offering a wide variety of poems and genres (traditional and recent), keeping in mind actual questions asked on recent exams, and giving examples of "close reading" techniques.

Physics in Everyday Life

Many of our experiences in daily life are with physics. The light and colors we see, the sounds we hear, the bridges and structures we traverse, and the multitude of electronic devices we use all derive from physics.

This seminar explored the physics of everyday life, and connections to other subject areas. Together participants reviewed selected readings and Web sites. At each weekly meeting, one Fellow presented his or her work in progress, with the seminar leader providing background on the physics and teacher colleagues offering reactions and ideas based on their experiences with students at various grade levels.

Fellows' curriculum units embrace assorted topics in physics. Abie Benítez developed lessons on light (luz) for students in the early grades at a

At each weekly meeting, one Fellow presented his or her work in progress, with the seminar leader providing background and teacher colleagues offering reactions.



Michael Mansland

The seminar on "Physics in Everyday Life." (Clockwise from left: Seminar leader Daniel E. Prober and Fellows Gwendolyn Robinson, Mary E. Jones, Abie L. Benitez, Pedro Mendia-Landa, Kristen A. Borsari, Jennifer Drury, and Tina M. Diamantini.)

dual-language school that introduces all children to both English and Spanish and which centers on science. Kristen Borsari's unit on flight, aimed at fourth graders, includes discussion not only of the Wright Brothers' first flight but of the experience of a Chinese immigrant kite-maker—appropriate for her school's international studies theme. Two colleagues at Bishop Woods Elementary School, Shannon Cohen and Tina Diamantini, developed companion units on sound and hearing that promise to complement each other well. Jennifer Drury will have students of English at her high school—a magnet with a focus on career preparation and business—study "how things work" and create marketing plans that cultivate both science and expository writing skills. Mary Jones will teach Newton's laws of motion to middle school students through a variety of demonstrations. Gwendolyn Robinson has a similar aim with her students, but her approach is to look at the broader variety of physical principles involved in an ordinary 24-hour period. Carolyn Kinder takes up the physics of cell phones for another middle school audience, students at a school with a science and technology focus. And Pedro Mendia-Landa, with his bilingual elementary students in mind, prepared a unit on simple machines using those found on the playground and in the classroom. He and Abie Benítez teach at the same school and together are enriching its science curriculum.

Described by the seminar leader as "both fun and instructive," these units serve students from first grade through high school. They emphasize inquiry-based learning of science, employing hands-on experiments designed to engage students' interest. The units in this seminar address educational standards that range well beyond traditional boundaries of physics, into literature and social studies. Significant material is also drawn from the World Wide Web, further supplementing the development of rich classroom experiences of science.

These units emphasize inquiry-based learning of science, employing hands-on experiments designed to engage students' interest.

Water in the 21st Century

This seminar explored the history of water availability and quality, and the laws and policies that govern access to water and acceptable levels of pollution. Water is necessary to sustain life on earth, yet it is increasingly scarce, and highly vulnerable to pollution. Nearly 70 percent of the planet's surface is comprised of water, yet nowhere on earth is water now considered safe to drink unless treated. The availability and quality of water will become increasingly important during the 21st century, as population grows, especially in arid regions. Pollution, waste, and other contaminants increasingly threaten water quality and human health. The World Health Organization estimates that nearly four million children die each year in poorer nations from preventable water-borne diseases alone. Nearly three million others die from vector-borne diseases such as malaria caused by a parasite carried by mosquitoes that thrive in wet environments.

Human use and abuse of land shapes both water availability and quality. Tropical deforestation reduces the forest's sponge effect, allowing more water

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to remain on the surface, providing breeding grounds for mosquitoes that may carry diseases such as malaria and dengue fever. Agricultural irrigation when combined with the use of fertilizers and pesticides contributes to the contamination of both surface waters and underground aquifers. Dense residential and commercial development create problems with sewage and storm water runoff that normally contain oil, gas, solvents, tire and brake fragments, and other residues emitted or leaking from the hundreds of millions of vehicles. In many coastal communities, heavy rains now carry a toxic cocktail of chemicals and bacteria through storm drains that empty into rivers, estuaries, lakes and marine environments, threatening the health of those live, work or recreate in the area.

This seminar considered many histories of water contamination, around the United States and in other countries such as Bangladesh.

This seminar considered many histories of water contamination, around the United States and in other countries such as Bangladesh. Participants observed that the consistent source of each problem was the absence of a culture that considered the environmental implications of incremental human development. Leaders failed to think ecologically about the effects of development. The neglect of the relations between water, development, and human health has proven costly and avoidable.

Among the cases of water contamination that participants reviewed was one concerning the island of Vieques in Puerto Rico, where U.S. naval bombing occurred for 62 years and where the landscape has been severely affected. Bomb fragments and residues are washed by heavy seasonal rains toward the beaches, mangrove lagoons and reefs that surround the island. Marine crabs and fish carry higher than normal levels of some metals released to the environment. Many of the islanders are fishermen who regularly consume their catch. Given these factors, it is no surprise that preliminary tests of human tissue samples collected from the population demonstrate a similar matrix of metals as those contained in the bombs. Water is the vehicle that transports the metals across the landscape to the ocean. And water is the solvent that makes these persistent elements available to move up the marine food chain, to the Viequenses' dinner tables, and into their bodies.

Informed by common readings and discussion of these cases, Fellows prepared and shared with one another their own curriculum units. Joanna Ali developed a unit for students in eleventh and twelfth grade that explores the history of science and policy regarding acid precipitation, including a pollution trading rights game that allows students to trade sulfur dioxide rights in response to federal regulations. Raymond Brooks, who specializes in helping middle-school students to develop science fair projects, designed a unit that explores the source, movement and fate of New Haven's drinking water. A teacher of seventh-grade science, Wendy Hughes prepared a unit that includes descriptions of the water cycle, an overview of chemical threats to drinking water (microbes, radionuclides and pollution), treatment options, a comparison of point versus non-point source pollution, and concludes with practical advice

Annual Report: The Seminars and Curriculum Units

to students and teachers regarding what they can do to conserve water and protect its quality. Deborah James created a primer on hydrology, and a concise overview of the key threats to water quality, for fifth- and sixth-grade students.

Sharron Solomon-McCarthy's unit is designed to be multi-sensory for middle-school students in special education, who will prepare a PowerPoint presentation that describes a specific water management problem. Roberta Mazzucco uses a question-based method to teach third graders basic science about global water availability and cycling, the source of local drinking water, treatment options, basic problems of pollution, and the strengths and limits of government attempts to manage water quality. A teacher of visually impaired students, Joanne Pompano created a unit that includes overviews of hydrology and ecology while focusing on the oyster industry of Long Island Sound. Laura Pringleton designed a unit for fourth and fifth graders that explores ways in which the marine environment may provide a scientific laboratory to search for new pharmaceutical agents that could treat serious human illness. A teacher of high school history and international relations, Ralph Russo notes that disputes about water availability or quality have been common in human history, especially in arid parts of the world, and that environmental and demographic pressures will intensify conflict over water resources; his unit includes a water rights game and strategies for conflict resolution.

"Collectively," the seminar leader concluded, "these units are impressive in their breadth of topical coverage, creativity in strategies to directly engage students in the materials, and their thorough documentation."

"These units are impressive in their breadth of topical coverage [and] creativity in strategies to directly engage students."

— Seminar Leader



Michael Marsland

The seminar on "Water in the 21st Century." (Left to right: Seminar leader John P. Wargo and Fellows Laura F. Pringleton, Deborah A. James, Joanne R. Pompano, and Raymond W. Brooks.)

The Process of Determining the Seminar Topics

Between October and December 2002, the teachers who served as Institute Representatives and Contacts for their colleagues had canvassed other teachers throughout New Haven elementary, middle, and high schools to determine the topics they wanted Institute seminars to address in 2003. (Please see Appendix for lists of teacher leaders.) The Representatives met together twice monthly and communicated individually with the school Contacts with whom they were responsible for staying in close touch. The Director and Associate Director of the Institute then recruited Yale faculty members who were qualified and willing to lead seminars that engaged the desired topics. Their specific proposals were then considered and approved by the Representatives.

In their evaluations, the 2003 Fellows indicated that the Institute Representative for their school had been helpful in many ways: by encouraging and assisting them to apply to the Institute, maintaining frequent contact with them, asking for their views on seminar subjects for the following year, and promoting the use of Institute-developed curriculum units. (Chart 1, reading from left to right, moves from the more helpful to the less helpful activities of the Representatives.) As a result, 37 (80 percent) of all Fellows said in the end that they had, while the program was being planned, sufficient opportunity to suggest possible topics for seminars. This is comparable to the rate of satisfaction indicated by the Fellows in 2001 and 2002 (75 and 66 percent, respectively).

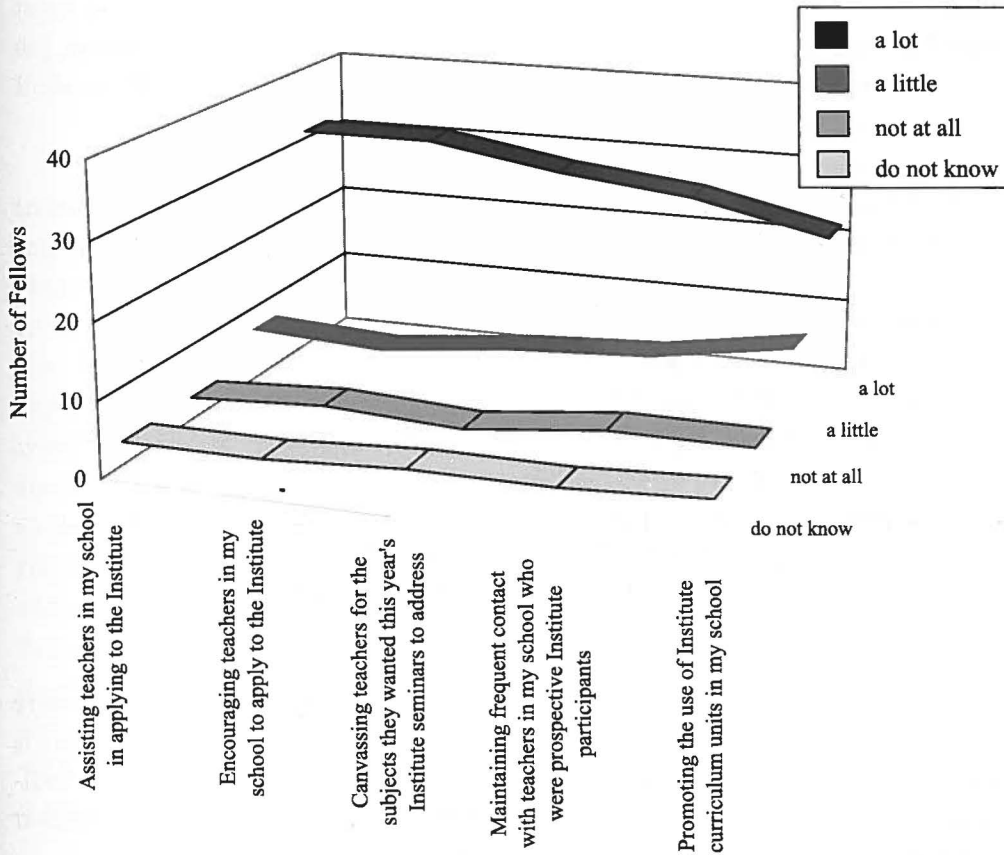
The Representatives met together twice monthly and communicated individually with the school Contacts.



School Representatives meeting. (Clockwise from front left: Representatives Stephen P. Broker, Raymond W. Brooks, Pedro Mendia-Landa, Kevin P. Inge, David DeNaples, Deborah A. James, Mary E. Jones, Joanne R. Pompano, Christine A. Elmore, Angelo J. Pompano, Jennifer Drury, Virginia Seely, Director James R. Vivian, Representatives Geraldine M. Martin, Jean E. Sutherland, Dina K. Secchiaroli, Sandra K. Friday, Sean Griffin, and Associate Director Josiah H. Brown.)

Chart 1

Institute Representatives' Helpfulness to the 2003 Fellows



Fellows indicated that the Institute Representative for their school had been helpful in many ways.

The Fellows' Application and Admissions Process

Having worked with teachers in their respective schools during the preceding months, the Institute Representatives met on January 7 to receive for distribution in all schools copies of the Institute application form, brochure, and descriptions of the seminars to be offered. At this meeting a general presentation of the subjects of the seminars ensured that all Representatives could explain to their colleagues the purpose of each seminar.

On January 14 the Institute held an open house for prospective applicants where any teacher might learn more about the planned seminars from the Representatives and from the seminar leaders, who attended and conducted discussions in small groups with interested teachers.

On January 21 the Representatives met to discuss their progress in working with prospective applicants and to hand in their own completed applications. The final deadline for teachers applying to the Institute was January 28. This date was selected so that teachers would apply in advance of the February school vacation. The office would then have the vacation period to process application materials, and the review of applications could be completed during February to provide the earliest possible notification to teachers who were accepted.

The applications were reviewed by three groups: seminar leaders, school principals, and seminar Coordinators.



Michael Mansland

Application Review meeting. (Left to right: Seminar Coordinators Joanne R. Pompano, Yolanda G. Jones-Generette, Jean E. Sutherland, Sandra K. Friday, and Carolyn N. Kinder.)

sion-making in the school district. The Institute's Representative for each school contacted the school principal or the principal's designee, who is asked to review each teacher's application. The intention is to increase awareness within each school of the projects that teachers wish to pursue in Institute seminars, to afford an opportunity for the principal and other educational leaders to examine the relationship between teachers' applications and school plans, and to increase the likelihood that the teachers will have a course assignment in which they can use their curriculum unit. In this review, the following questions are posed:

- Is the applicant's proposal consistent with, and significant for, the curricula and academic plans for your school?
- List the courses and/or the grade levels where the proposed unit will be used; if there are none, state "none."
- Will the applicant be assigned next year one or more of these courses in which to teach the unit?
- Please indicate any special merits or problems you find with the application.

When this procedure was introduced in 1998, Reginald Mayo, Superintendent of the New Haven Public Schools, had written to all principals: "We believe this is a highly promising way for ensuring that the assistance that the Institute provides to individual teachers and to teams of teachers has the

Annual Report: The Process of Determining the Seminar Topics

best prospect for advancing each school's academic plans." This process informs the consideration of each application, provides each applicant pertinent guidance, and often provides a significant opportunity for Institute Representatives to talk with their principals about the Institute.

It is important that principals appreciate the nature and the significance of the curriculum units that teachers in their school will be designing, and we include here some excerpts from principals' comments on the Fellows' applications:

This will be a good addition to our curricula—especially because it is science.

This applicant must model for other teachers, and this unit will be very conducive to the purpose of modeling and demonstrating.

This teacher is extremely valuable in terms of curriculum development, and I know he will be an asset as well.

This proposal fits nicely into our school's global theme.

This proposal will give our ESL students an opportunity to share their culture.

This unit will familiarize students with the history of New Haven and the Native Americans. It will help the students differentiate between primary and secondary sources.

This will enhance the curriculum; students will get more than the usual.

This teacher leads by example and is consistently looking for enriching opportunities for her students.

This unit is aligned with our curriculum standards and will enhance the curriculum.

I am very excited about the proposed curriculum. It will speak to our students, and I expect they will learn the skills required of them in an exciting and captivating course.

Poetry is often a difficult curricular area in terms of capturing student interest. The teacher would benefit from exploration of this area.

Principals appreciate the nature and significance of the curriculum units that teachers in their school will be designing.

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As an arts and academic school with an interdisciplinary focus, her examination of both the visual and poetic dimensions of rap should fit well into our arts curriculum.

As in the past, the Institute formed a group of teachers who served as Coordinators to assist with the organization and smooth operation of the seminars. The Director, with the assistance of the Steering Committee, selects these Coordinators from the group of Representatives who had earlier helped to plan the program of seminars. The Steering Committee is routinely involved in cultivating teacher leadership and identifying the positions for which individual teachers are most qualified.

Coordinators provide teacher leadership without diminishing the collegial rapport within each seminar.

There is one Coordinator in each seminar. They act as liaisons between the seminars and a Coordinators' committee to facilitate the exchange of information and to provide teacher leadership without diminishing the collegial rapport within each seminar. A seminar Coordinator must be, and must intend to continue as, a full-time teacher in one of New Haven's public schools. A Coordinator accepts the following responsibilities:

- To work with school Representatives at the conclusion of the application process, to serve on an admissions committee to consider proposals for curriculum development submitted by teachers applying to become Fellows, and to make recommendations to the Director about whom to accept as Fellows.
- To monitor the progress of a seminar through observation and conversation with participants, and to give progress reports at weekly seminar Coordinators' committee meetings.
- To report to the seminar members any organizational information which should be circulated, such as the schedule of any visitors and notice of Institute-wide activities.
- To act as a resource for members of the seminar, providing information about unit-writing deadlines, guidelines for writing curriculum units, computer assistance available to Fellows, copyright procedures, and University facilities Fellows may use.
- To be available to the seminar leader to provide information on Fellows' perceptions of the seminar and on Institute policies generally, and to offer assistance as may be needed.
- To assist with the smooth operation of the seminar by keeping track of Fellows' promptness and attendance and the timeliness of their written submissions, and by encouraging Fellows to make and keep appointments for individual meetings with the seminar leader.

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- To attend and come prepared to weekly committee meetings with the Director/Associate Director and to take professional days as needed for the above purposes.

When the seminars began, each Coordinator would participate as a Fellow in a different seminar. At this earlier point they served as an admissions committee. They met after school on February 5 to conduct a first reading and discussion of the applications to their respective seminars. They then contacted all teachers whose applications needed to be clarified or amplified. On February 12 the Coordinators met for a full day, by taking professional leave, for their final consideration of the applications and their decisions. They met again two days later to resolve issues remaining in some applications.

During their review, the Coordinators considered the findings of the school administrators and seminar leaders and made recommendations to the Director about which teachers the Institute should accept. By these means, the Institute seeks to ensure that all Fellows participate in seminars that are consistent with their interests and applicable in the courses they teach. The Institute accepted as Fellows 55 New Haven teachers, 35 in the humanities and 20 in the sciences. One team of teachers, in the humanities, was admitted from Beecher Elementary School with the expectation that team members would coordinate their curriculum units and work together during the school year, planning cross-grade and cross-subject instruction and school-wide activities. A meeting of seminar leaders and Coordinators was held on February 25 to discuss the admissions process just completed, and to review the seminar and unit writing process and the policies and procedures of the Institute.



A meeting of seminar leaders and Coordinators was held to discuss the admissions process just completed, and to review the seminar and unit writing process and the policies and procedures of the Institute.

Joint meeting of seminar leaders and Coordinators. (Clockwise from center: Director James R. Vivian, Carolyn N. Kinder, Paul H. Fry, Dudley Andrew, Sandra K. Friday, John P. Wargo, Joanne R. Pompano, Daniel E. Prober, Jean E. Sutherland, Yolanda G. Jones-Generette, and Associate Director Josiah H. Brown.)

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Forty-nine percent of the teachers accepted in 2003 were participating in the Institute for the first time.

Consistent with the Institute's aim to serve the largest possible proportion of all New Haven teachers, 27 (or 49 percent) of the teachers accepted in 2003 were participating in the Institute for the first time. Of these first-time Fellows, 20 were in the humanities and seven were in the sciences. More than one quarter of all the Fellows accepted (14 of 55, or 26 percent) were Black, nearly two thirds (36 of 55, or 65 percent) were non-Hispanic White, 6 percent were Hispanic, and 4 percent were of South Asian descent. Eight individuals were in their first year of teaching in New Haven.

The Fellows Who Were Accepted

Fellows came from half of the district's 44 schools (which grew to 46 with the opening of two new schools in the fall), including all of the eight New Haven high schools, four of the six middle schools, and three of the seven K-8 schools. Of the 19 elementary schools, seven had teachers participating. The Institute first admitted elementary school teachers in 1990; this year 16 (29 percent) of all Fellows were elementary school teachers. Twenty (36 percent) were middle or K-8 school teachers, and 19 (35 percent) were high school teachers. Two schools had seven or more Fellows; four schools had four or more, and seven schools had three or more.

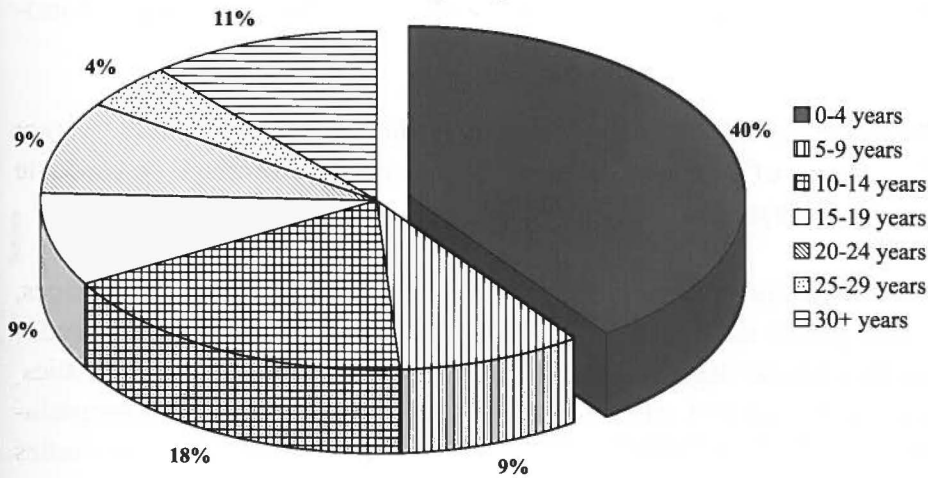
The participants included teachers from all stages of their careers. Perhaps reflecting the effort to recruit new teachers as well as demographic trends among the district's teaching force, 33 percent of Fellows were age 30 or younger. Overall, 24 percent of the Fellows were 41-50 years old; 42 percent were younger, and 33 percent were older.

Consistent with the Institute's effort to involve beginning teachers, as Chart 2 shows, for the second consecutive year more than one third of the Fellows (40 percent, following 35 percent in 2002) had four or fewer years of total experience in teaching. This was twice the proportion of Fellows at that stage of their careers during the years 1998 through 2001, when the annual average was 20 percent. In 2003 almost one quarter (24 percent) of the Fellows had 20 or more years of total experience in teaching. Yet nearly one half (48 percent) of the Fellows had four or fewer years of experience teaching in the New Haven school system.

Indicative of the need for the professional development that the Institute provides, more than two thirds (73 percent) of all Fellows have been in their present teaching position four or fewer years; almost nine in ten (89 percent) have taught in their present position for nine years or less. Thus, even though half (51 percent) of the Fellows have ten or more years of total teaching experience, a substantially larger proportion (73 percent) have four or fewer years of experience in their present position. These figures help to explain why many teachers say they need to develop their knowledge in subjects that they have

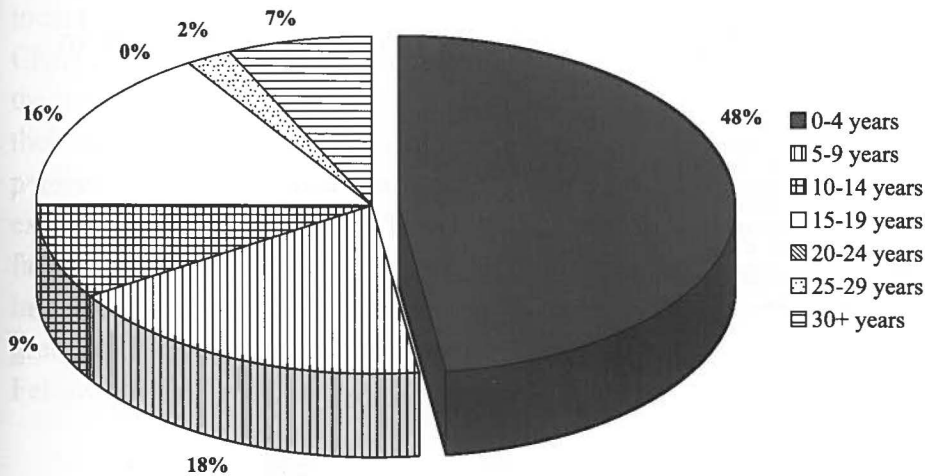
Chart 2

Total Years Teaching Experience for 2003 Fellows



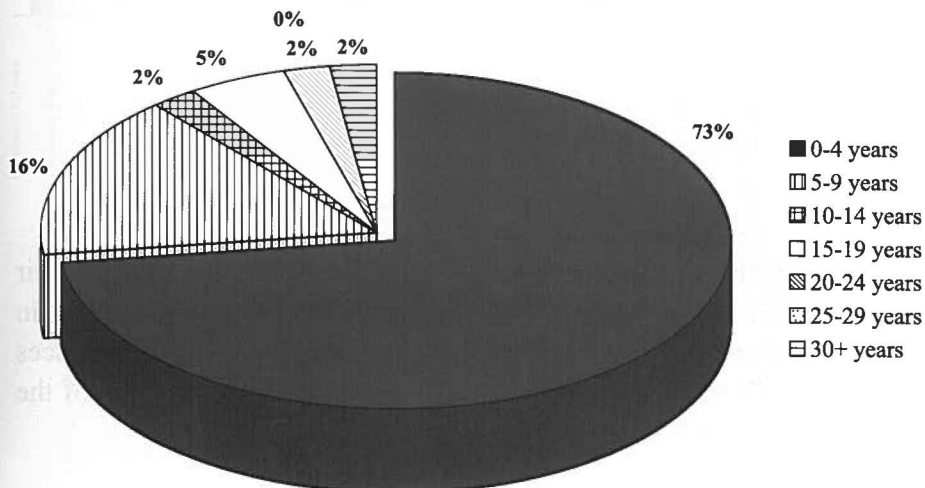
Total Number of Respondents = 45

Total Years Teaching Experience in New Haven for 2003 Fellows



Total Number of Respondents = 44

Total Years Teaching Experience in Present Position for 2003 Fellows



Total Number of Respondents = 44

Three fourths of all Fellows have been in their present teaching position four or fewer years.

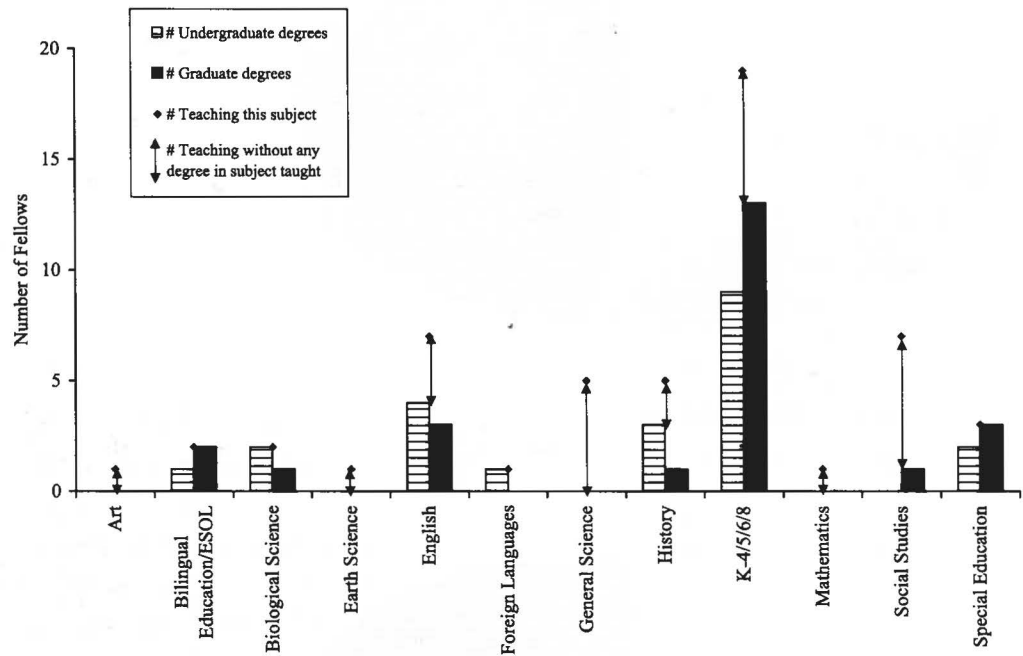
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been recently reassigned to teach, or curricular materials for students of a different age or background from those they have taught before. The data suggest that teachers' learning must keep pace with their often changing responsibilities.

Moreover, as in past years—and as is the case in the school system generally—many of the 2003 Fellows did not major in college or graduate school in the subjects they currently teach.

As Chart 3 shows, only in the fields of bilingual and foreign languages, biology and special education did all Fellows teaching a subject have a graduate or undergraduate degree in that subject. In four fields—art, mathematics, earth science and general science—no Fellows had a graduate or undergraduate degree in a field they taught. Only one of seven teachers of social studies had a graduate or undergraduate degree in that area.

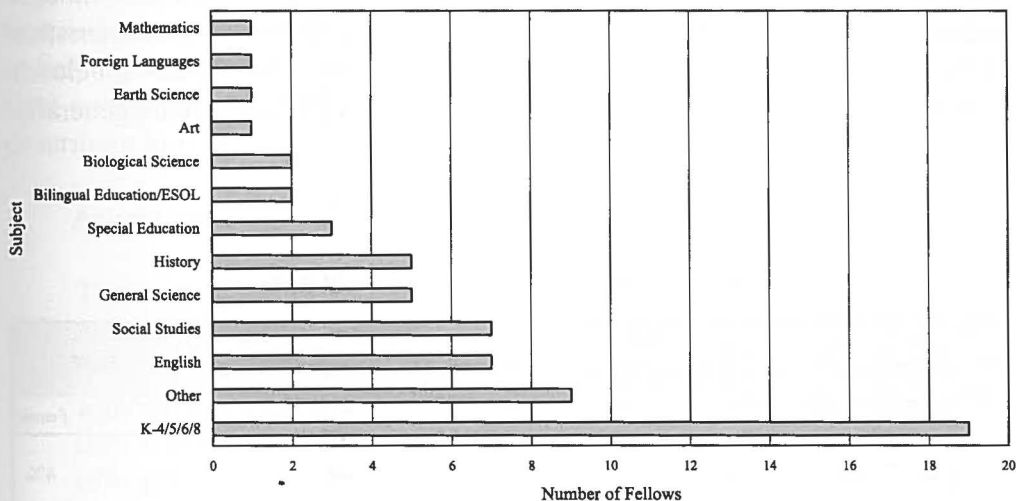
Chart 3
Number of Fellows with Degree in a Subject They Taught in 2002-2003



Many of the Fellows did not major in college or graduate school in the subjects they currently teach.

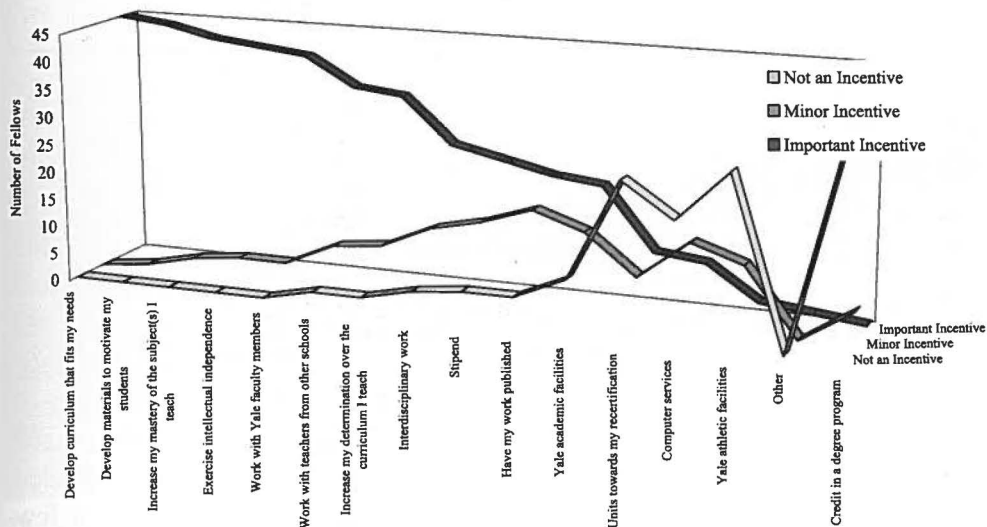
Chart 4 shows the subjects Fellows taught in the 2002-2003 year of their Institute participation. Overall, more than two fifths (43 percent) of Fellows in the humanities and nearly four fifths (78 percent) of Fellows in the sciences had not majored either in college or in graduate school in one or more of the subjects they taught in that year.

Chart 4
Subject Taught by 2003 Fellows



Understandably, therefore, when the 2003 Fellows were asked about the incentives that attracted them to participate in the Institute, they responded (as Chart 5 shows, reading left to right from the most to the least important) that the most important incentives were the opportunities to develop curricula to fit their needs (100 percent), to develop materials to motivate their students (98 percent), to increase their mastery of the subjects they teach (93 percent), to exercise intellectual independence (91 percent), and to work with university faculty members (91 percent). Indeed, incentives that might be imagined to be important for teachers with access to Yale University—credit in a degree program and access to Yale athletic facilities—were much less important for Fellows in the Teachers Institute.

Chart 5
Incentives for 2003 Fellows to Participate



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As past Institute studies have shown, Fellows are in most respects highly representative of all New Haven teachers. So, for example, this year's Fellows continue to reflect the gender and ethnicity of all New Haven teachers, though there are great disparities overall between the ethnic and racial characteristics of New Haven teachers and those of their students. (See Table 1 below.) Similarly, the Yale faculty members who have led Institute seminars generally reflect the wider faculty at Yale.

Table 1
Ethnicity and Gender of Participants

	White non-Hispanic			Black non-Hispanic			Hispanic			Other		
	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female
Institute Fellows, 2003	65%	20%	46%	26%	2%	24%	4%	2%	2%	4%	0%	4%
Institute Fellows, 1978-2003	69%	20%	48%	26%	6%	20%	4%	1%	3%	1%	0%	1%
New Haven Public School Teachers, 2003	73%	19%	54%	18%	4%	14%	7%	1%	6%	1%	0%	1%
New Haven Public School Students, 2003	11%	5%	6%	54%	28%	26%	31%	16%	15%	3%	2%	1%
Institute Coordinators, 2003	67%	17%	50%	33%	0%	33%	0%	0%	0%	0%	0%	0%
Steering Committee, 2003	50%	25%	25%	25%	0%	25%	25%	25%	0%	0%	0%	0%
Representatives and Contacts, 2003	67%	21%	45%	23%	6%	17%	11%	2%	9%	0%	0%	0%
Institute Seminar Leaders, 2003	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Institute Seminar Leaders, 1978-2003	88%	73%	14%	7%	6%	1%	5%	2%	2%	0%	0%	0%
Yale Faculty, 2003 (includes tenured and term ladder faculty)	86%	63%	23%	3%	2%	1%	3%	2%	1%	9%	6%	3%

Totals may not add to 100% due to rounding.

Fellows are in most respects highly representative of all New Haven teachers.

Activities for Fellows

At the first organizational meeting of each seminar, held on March 4, 2003, the seminar leader distributed an annotated bibliography on the seminar subject and presented the syllabus of readings that he or she proposed that the seminar would consider. The Fellows described the individual curriculum units that they planned to develop. This afforded the members of each seminar an overview of the work they were undertaking together and the projects they would pursue individually. The bibliographies both introduced the seminar subject and guided Fellows as they began research on their curriculum units. With only a few exceptions, Fellows explained that this stage-setting procedure had worked well.

Several noted the value of their seminars' reading lists. One said, "Although the readings were lengthy and dense at times, they provided me with knowledge that supported my discussion in the seminar. The organization and content of material covered in the seminar was widespread and useful in helping to guide me." A participant in a different seminar spoke of "the brilliant curriculum and compelling syllabus that our leader put together for us," describing him as "a wealth of knowledge and information."

According to another Fellow,

The readings were very informative, and I found myself buying a number of the books on the syllabus so as to get each author's full point of view. The readings amounted to about 80 pages per week, a substantial investment in time but well worth it. My own collection of readings relating to my curriculum unit proved very interesting, as well. •

Before the second seminar meeting all Fellows met individually with their seminar leader to discuss their projects. The Institute requires that Fellows schedule at least two such conferences as part of the unit writing process; many Fellows, however, meet more frequently with their seminar leader. At the end of the program, most Fellows (82 percent) said that they had ample opportunity to discuss their choice of readings with the seminar leader. According to one veteran Fellow, "My meeting with [the seminar leader] was very helpful and his written comments on my drafts gave me the direction I needed to develop what I consider to be one of my best units." Another wrote, "I had an idea about what I wanted to do, but when I first met with [the seminar leader], he suggested a structure I might use. It was exactly what I needed."

"The readings were very informative, and I found myself buying a number of the books on the syllabus so as to get each author's full point of view."

—Institute Fellow



Michael Marsland

The seminar on "Everyday Life in Early America." (Left to right: Fellows Sheila Wade and Malini Prabakar.)

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A seminar leader also characterized these individual meetings:

These were usually done at points in the term where we needed to meet—to define a topic, to review work, or just to think through some ideas. Most of the teachers used these meetings very effectively, and one of the effective modes was to sit at the computer and review information on various Web sites that the teacher wished to draw upon.

During the period that preceded the regular weekly meetings, Fellows continued their reading, both preparing for the upcoming seminar discussions and working toward a brief prospectus of what their final units would contain. At the second seminar meeting, on April 8, Fellows submitted this prospectus, presented their revised unit topics, and began to discuss the common readings. The regular weekly seminar meetings began on May 6; thereafter Fellows continued to develop their units in stages, with a first draft submitted on May 27. The weekly meetings of the seminars continued through July 15, with Fellows submitting the second draft of their units on July 1 and their completed units by July 31.

For several years, Fellows have been asked to submit the prospectus, together with a revised topic of the unit and a list of appropriate readings, at the time of the second seminar meeting. This allows them a full six weeks to write a first draft. The due date for the second draft is late enough to allow Fellows ample time to address the comments they received on the first draft from other Fellows and from the seminar leader. Some seminar leaders have urged that the revised topic, preliminary reading-list, and first draft be submitted somewhat later, and some have informally instituted yet another draft between the first and second drafts. Every year, too, some Fellows are concerned that the writing of the unit begins before they have entered well into the seminar topic, or that too much work must be done at the end of the school year, when many are especially busy. Still, a majority of the Fellows have been satisfied with this schedule and its methodical series of deadlines during the spring and into the summer. Overall 87 percent of the Fellows thought the unit writing deadlines occurred at the right time in relation to the school calendar, in comparison with 69 percent the prior year.

One Fellow spoke of "a structured environment in which to develop a unit of study that will be beneficial to both the teacher and the students." According to him, "The Institute provides both a framework and resources that allow the teacher to research and develop a unit of study tailored to students' needs." Regarding the opportunity for planning and reflection, another Fellow said, "As public-school teachers, in overcrowded classes and with no time to prepare at all during the year, the Institute is an invaluable help in this matter." Another wrote, "During the school year it is very hard to put together a well thought-out unit and interesting interdisciplinary unit. The seminar sort of puts teachers ahead of the game. This results in a more confident teacher, better classes and more learning going on."

"The Institute provides both a framework and resources that allow the teacher to research and develop a unit of study tailored to students' needs."

—Institute Fellow



Fellow Deborah A. James and her students at Betsy Ross Arts Magnet School.

Others commented:

The unit I prepared and the seminar in which I participated has allowed me to research and develop a depth of knowledge which I did not possess before. Preparing a unit in advance allows me to be more creative in my approach in teaching the required curriculum. Spending time researching and listening to seminars, while not in school, afforded me the opportunity to get involved in the subject matter while not having to teach it the next day. I truly feel a specialist in the unit I developed and look forward to sharing with my colleagues ideas for projects.

I have done background work that will enhance my teaching in the coming year. Having created this unit, I will be able to spend less time on planning and more time on assessing students' progress. The schedule I have established in the unit will help me to present matter in a timely manner. I already know what resources I need and where to find them.

The Institute attaches great importance to the process through which Fellows develop their curriculum units, and many Fellows commented upon the benefits derived from following this process. One Fellow observed: "Since this year was my first experience with the Teachers Institute, I was feeling slightly overwhelmed when I first received my packet of the Institute schedule and curriculum guidelines and requirements. However, as the Institute progressed and time passed, it was clear how things were going to fit together and the unit would be developed." In this seminar, some time "was used to discuss

"The seminar puts teachers ahead of the game. This results in a more confident teacher, better classes and more learning going on."

—Institute Fellow

The Institute attaches great importance to the process through which Fellows develop their curriculum units.

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our units, and share our troubles with our colleagues to see if they had any insight or useful resources/information." According to the Fellow, "This was extremely successful in giving me a sense of confidence and knowing that I was on the right track." She said that her seminar leader "provided great feedback on my unit and materials/resources that would be valuable to me." By the end of the process, this teacher "found the Institute to be a very positive professional experience" in which she was able to "develop a concise, highly polished unit that will not only assist me as a staff developer, but also those teachers I support and guide throughout the year."

As her statement suggests, the discussion of Fellows' units-in-progress is an important aspect of the writing process and of many participants' seminar experiences. Another Fellow said, "I found working with my colleagues was very engaging. A number of them had nice suggestions for my unit. One suggestion was the inclusion of some alternative forms of assessment for my guided research project." Another wrote, "For me the most enjoyable part of the seminar came when Fellows shared their individual units. There was often lively discussion, including contributions from our leader. People shared ideas with the presenters and asked questions, which seemed to indicate that they might use some portion of the material themselves." A third "found it very helpful to have the input and some valuable suggestions of resources from members of the seminar." A fourth reflected, "Most of the school day is focused on reading and math. When developing this unit on physics I was able to incorporate other subjects into the lessons. I feel that the other participants in my seminar helped to direct my unit to the point it is at. I gained knowledge about an area I was unfamiliar with, which will help in my future teaching."

"For me the most enjoyable part of the seminar came when Fellows shared their individual units. There was often lively discussion, including contributions from our leader."

—Institute Fellow



Michael Mansland

The seminar on "Physics in Everyday Life." (Clockwise from left: Fellows Tina M. Diamantini, and Carolyn N. Kinder, seminar leader Daniel E. Prober, and Fellow Gwendolyn Robinson.)

Another Fellow called her seminar "wonderful," the seminar leader "an amazing source and guiding force for the seminar," and described it as "very intellectually stimulating." She said, "Most members were inspired to do additional research, and there was an atmosphere of sharing in that respect. I would LOVE to do it again!"

At the conclusion of the seminars, most Fellows indicated that the program schedule (96 percent) and the guidelines for writing a unit (96 percent) had been useful to them to a great or moderate extent. This year 61 percent of the Fellows said they tried out the subject matter and 80 percent said they tried out the strategies of their units in their classroom. Of those who did, almost all Fellows (92 percent) said that this influenced what they included in the final units.

During the first two months of the program, which serve as a reading period, all Fellows also met together on Tuesday afternoons for a series of talks. These talks are designed to expose all Fellows to some of the work done in seminars other than their own, and in some cases to subjects and leaders of possible future seminars. Ordinarily, therefore, some current or prospective seminar leaders are included in this series. At the same time, some other faculty members are invited to speak on topics the school Representatives believe will be of particular interest to many Fellows, based on the interests expressed during the months of planning and canvassing the preceding fall.

In response to the teachers' interests as expressed to their Representatives, the current seminar leaders gave three of the five talks in 2003; two prospective seminar leaders also gave talks.

- On March 11, Daniel E. Prober employed scientific demonstrations to illustrate "Physics in Everyday Life."
- On March 25, John P. Wargo discussed the science and public policy of "Water in the 21st Century."
- On April 1, John P. Demos evoked the rhythms and culture of "Everyday Life in Early America."
- On April 15, Alessandro Gomez spoke of "Burning the Flame: A Fossil-Fueled Civilization or Else," with live Web site connections to illustrate engines and combustion.
- On April 29, Alexander Nemerov used *War News from Mexico* as his point of departure, giving the audience "A Close Look at Richard Caton Woodville's 1848 Painting."

The talks were popular among the great majority of Fellows, indeed more popular than in some past years. The few criticisms primarily related to the

"Most members were inspired to do additional research, and there was an atmosphere of sharing in that respect. I would LOVE to do it again!"
—Institute Fellow

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use of precious time—whether that time might have been used more effectively in different ways within the Institute. One Fellow described the talks as "interesting" but said "they should not have been mandatory. We could have spent more time with our own seminar."

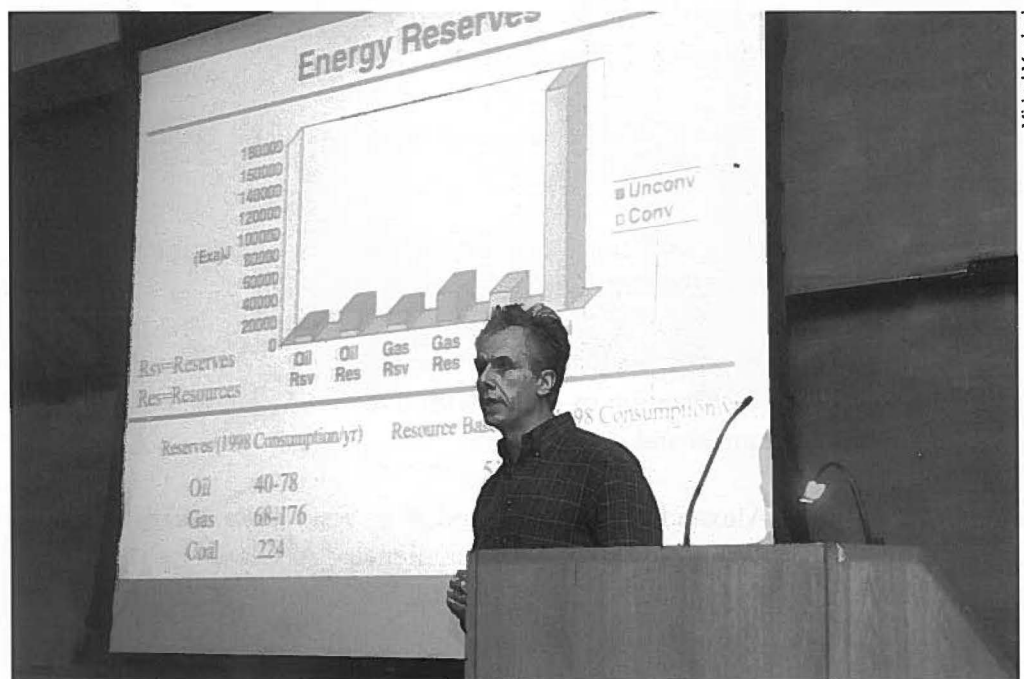
Yet most Fellows saw in the talks the purposes for which they were organized. Ninety-six percent of Fellows said that to a great or moderate extent the talks provided them intellectual stimulation, while most said they provided a sense of collegiality and common purpose among Fellows (91 percent). Four fifths (82 percent) said the talks were successful to a great or moderate extent in providing an overview of Fellows' work in the seminars. A slightly larger proportion (86 percent) said that the Institute scheduled the right number of talks.

According to one Fellow:

Attending all of the [lectures] on the different topics was a clear example of the etiquette, professionalism, and tremendous intellect all the professors have. In such a short period of time, I was able to learn so much about topics that have either never interested me before or topics I had no idea even existed. I feel that this part of the Institute was valuable in helping me to decide what seminar topic I would like to study next year or thereafter.

One teacher "appreciated being exposed to other professors at Yale." Another said, "The lecture series was a good mix of very interesting subjects and the discussions that ensued after the lectures were often lively and thought provoking." Still another called the talks "very interesting," adding that "they provided a wonderful overview of the seminars that other Fellows were attend-

"The lecture series was a good mix of very interesting subjects and the discussions that ensued after the lectures were often lively and thought provoking."
—Institute Fellow



Alessandro Gomez speaking on "Burning the Flame: A Fossil-Fueled Civilization or Else. . ."

ing. I feel this is an important part of the Institute with the added benefit of allowing us to come together as a group.”

Many Fellows reported that the talks prompted them, to a great or moderate extent, to read about their topics (60 percent, compared with 51 percent in 2001 and 70 percent in 2002), discuss the topics with their students (53 percent), and discuss the talks with other teachers (85 percent). In the latter two respects, these figures were similar to reactions expressed in the two prior years.

As in other recent years, the Institute scheduled a session on curriculum unit writing, well before the regular meetings of the seminars began. Before starting on their curriculum units, the Fellows all need to understand the central role that the process of writing plays in Institute seminars. As part of their admissions folder, all Fellows had received Institute guidelines and mechanical specifications for preparing curriculum units, which outline the Institute writing process and the five steps for Fellows’ formulating, reformulating, and enlarging their individual units. On March 18, the teachers serving as seminar Coordinators comprised a panel in leading a session on curriculum unit development.

The Coordinators spoke from their own experiences in researching and writing new curricula as Institute Fellows. Representing among them the elementary, middle and high school levels, the Coordinators spoke to all the Fellows on these topics: “Narrowing Your Topic and Considering Your Audience”; “Using the Institute’s Reference Tools”; “Following the Institute Process for Unit Development”; “Using Technologies for Research and Writing”; “Aligning Your Unit with School Plans and District Goals”; and



Michael Marsland

The Fellows all need to understand the central role that the process of writing plays in Institute seminars.

Workshop on Curriculum Unit Development. (Seminar Coordinators Jean E. Sutherland and Sandra K. Friday.)

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"Supporting New Teachers: The BEST Portfolio and Beyond." Then the Fellows were divided into seminar groups, where each Coordinator led a discussion of purposes and practices in writing Institute curriculum units. This afforded an opportunity for the first-time Fellows to learn about the guidelines and other aspects of curriculum unit writing from experienced Fellows. It also encouraged experienced Fellows to share that experience and allowed all to discuss how the completed volume of units might display a range of teaching strategies and contain a standard form of annotation. By leading these discussions, the Coordinators also identified themselves as being knowledgeable about the process of writing curriculum units, so that other Fellows might seek their advice.

At the Coordinators' weekly meetings with the Director and Associate Director, which were held on the day after seminar meetings, they discussed the progress of each seminar and gained an overview of the program. In addition, the Coordinators met with the seminar leaders immediately before the program began to provide them with information about the teachers who had been accepted and to begin to define their role in assisting with the conduct of the seminars. Both seminar leaders and Fellows acknowledged in their evaluations the essential role of the Coordinators. Ninety-seven percent of Fellows agreed that the Coordinators provided teacher leadership without diminishing the collegial relationship within the seminar. Fellows found the Coordinators to be helpful either a lot (93 percent) or a little (5 percent) in providing information about unit writing deadlines; helpful either a lot (84 percent) or a little (13 percent) in providing information about guidelines for unit writing; helpful either a lot (76 percent) or a little (20 percent) in providing information about the use of University facilities; and helpful either a lot (80 percent) or a little (18 percent) in facilitating discussion of Fellows' work in progress. In each of these areas, the percentage of Fellows indicating their Coordinators as helpful "a lot" reflected an increase over 2002. Few Fellows found the Coordinators unhelpful in any respect. One Fellow said: "I think our seminar Coordinator did an outstanding job. She kept us informed without being pushy." Another observed that the Coordinator's presence was one reason "I feel I was able to be as successful as I was"; the Coordinator provided "important details and guidelines for writing the curriculum and was very helpful in answering questions."

Both seminar leaders and Fellows acknowledged in their evaluations the essential role of the Coordinators.

Seminar leaders also expressed appreciation for the collegial support that their Coordinators offered. According to one seminar leader, the Coordinator "knows how to ease us all through the complexities of formatting, and is very conscientious in keeping everyone on task." The Coordinator, he continued, "helped me sort through" challenges that emerged "while issuing timely reminders to others as need arose."

To maintain current information on the program and to address any problems that arose, the Institute Director and Associate Director met monthly with the seminar leaders as a group. This also afforded the seminar leaders, three of whom were conducting an Institute seminar for the first time, an

opportunity to talk with one another about their approaches to the seminar and experiences in it.

Rewards for Fellows

The seminars are the core collaborative experience of the Institute, and each year the majority of Fellows' comments about the seminars have been strongly positive. Again this year their comments were often very enthusiastic. One said: "I had a great experience as a Fellow this year," adding, "The [materials] and the analytic methods I was exposed to are invaluable to me. They will absolutely make me a better teacher." Another said that "the positive energy was inspiring and stimulating in every single session." She observed, "Our seminars were largely semi-guided discussions and our biggest problem was that so many of had so much to contribute that time flew and left us wanting more." She said, "The Fellows seemed to love this chance to enhance our regular syllabus" and concluded, "Overall, I thoroughly enjoyed the seminar and worked hard to create my unit that was a challenge." Another Fellow wrote that the seminar "not only helped me to prepare an interesting unit for my students, but it really gave me tools to be a better teacher in general." A fourth said, "Participation in this year's Institute was a phenomenal experience, and [the professor] served an engaging seminar leader!" And a fifth wrote, "Engaging subject matter, a thoughtful seminar leader, guidance in using the Yale database, collegial colleagues, and field visits combined to make [this seminar] a very intellectually engaging and positive experience."

"The positive energy was inspiring and stimulating in every single session."

—Institute Fellow

Another Fellow described it as a "privilege" to participate in a seminar that was "enjoyable, stimulating and profitable," with a seminar leader who "has such an incredible depth of knowledge of all aspects of [the subject]." This Fellow elaborated:

The seminar sessions were run very punctually; no time was wasted. Sometimes, we could have gone beyond the time limit. All participants were expected to be prepared for the scheduled discussion topic but no one was ever pressured. There was a comfortable mix of academic responsibility and sociability. The topics were not so much the type which created lively interaction or debate but were more thought-provoking and contemplative. The topics were the kind that would be 'stuck in your head' on the drive home, which in turn would encourage you to seek more information. Although the seminar sessions have ended, the desire to understand more continues.

Others said:

I had a great learning experience in the seminar this year. The instruction was compatible with my learning style. As a result, I felt relaxed, and although tired from a busy day at school, I was

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able to focus and maintain interest in the seminar. The seminar leader engaged the participants in both audio and visual presentations.

"I thoroughly enjoyed the seminar. Right from the beginning we began sharing our plans for our curriculum units with the other participants."

—Institute Fellow

I thoroughly enjoyed the seminar. Right from the beginning we began sharing our plans for our curriculum units with the other participants. [The seminar leader] was very helpful in suggesting resources and helping us to narrow our topics. We also met individually with him and he always availed himself to us. The readings we did were given to us on disk so we could access them at home. Very early in the seminar [he] took us to a nearby computer lab where we had a presentation by a member of the Yale library staff. [The seminar leader] also shared some insights that were helpful about Web sites and ways to do searches on the Internet. We made a [field] trip. . . . As I look back now, I realize that we squeezed a lot into a short amount of time.

The Yale faculty members who led seminars described their seminar in both specific and general terms. One seminar leader remarked, "The principle of meeting halfway is socially and ethically as well as intellectually the key." Another said of the Fellows,

"It seems they all feel they have acquired a new discipline, passion, and indeed 'mission.'"

—Seminar Leader

The rapport of the seminar topic to their unit appeared as things progressed. About five weeks in, everyone (as far as I could tell) had bought the group project and prepared assiduously for each Tuesday session. It seems they all feel they have acquired a new discipline, passion, and indeed 'mission.' I feel that even those whose projects seem oblique to the topic of the seminar will make use of what they learned in a systematic way.

A third seminar leader described how participants collaborated, beyond time devoted to lecturing and to individual teachers' presentations:

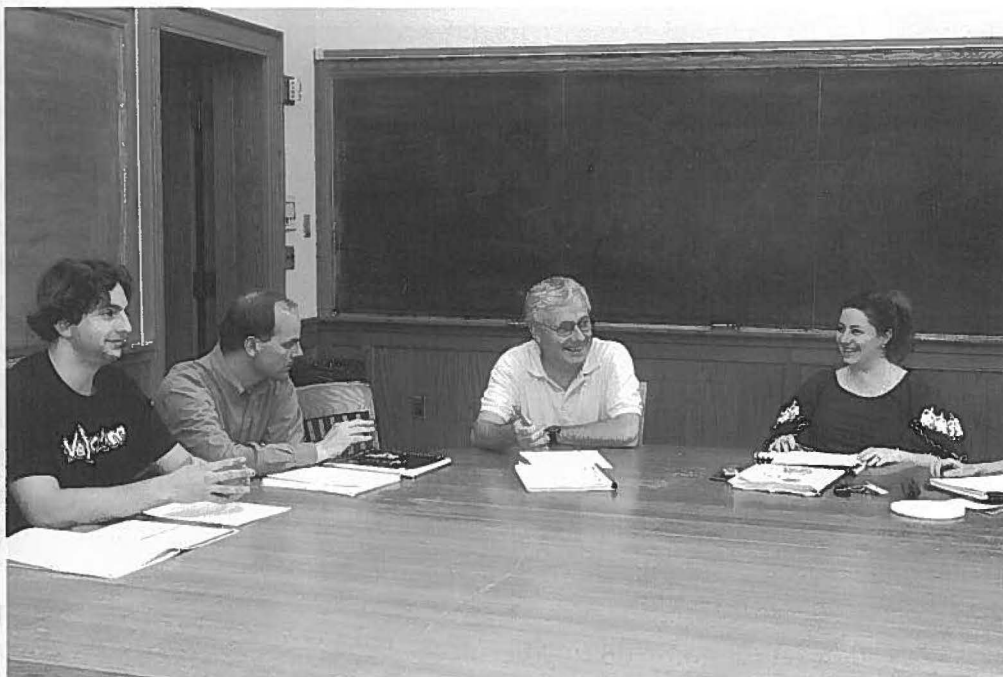
We also exchanged our unit write-ups in small groups, so each teacher received input from two colleagues who read her unit closely. In this I tried to pair a teacher with Institute experience with one or two newer teachers; this worked well. We also then discussed the reactions of the small group with the whole group, and I think this improved the written work a great deal. The seminar group felt comfortable with such self-criticism, and we had overall a very easy way of interacting, with little feel of failure in [the seminar].

By the end, this leader was "very happy with most of the written units. They contain useful information that another teacher would want in order to enter into that topic." He said, "The teacher-written narratives in this case will provide an easy point of entry and introduction."

Fellows themselves especially relished the opportunity to talk and work with other teachers across the artificial boundaries that often separate grade levels, schools, and disciplines. One Fellow regarded this “camaraderie” as “really priceless. I love spending time with my colleagues discussing film, literature, and school. It was a really nice experience.” Another was pleased “to share things about curriculum, schools, classes and students. I found it exhilarating working with peers. I was happy to share my thoughts and ideas with them. It was neat working with adults on the same theme. The group work that we did for class was refreshing. There were open minds and an appreciation of everyone’s observations. It was nice to see educators learning together.” Another wrote: “One of the most important experiences was that I was able to meet lots of people from the district. We had several conversations about our daily teaching careers. We were able to discuss ideas, share materials, and vent if needed! It was encouraging to know that others were experiencing similar struggles.”

Several teachers commented on the inspiration and unity they discovered in working together. As one described:

I really valued the candor of [the other Fellows]. I also appreciated the hard work that they did in the Institute and in their classrooms. My fellow [participants] were very helpful and it was a very pleasant experience going to classes, learning, and making friends. There was a variety of people in the [seminar], about half female and half male. The grades we taught were elementary through high school. As teachers we shared many similar tasks and objectives as well as obstacles and strengths. Another strength of the Institute was the small to moderate-sized group made it easier



Michael Mansland

“I found it exhilarating working with peers. . . . It was nice to see educators learning together.”
—Institute Fellow

The seminar on “Teaching Poetry in the Primary and Secondary Schools.” (Left to right: Fellows David N. Reynolds and Thomas D. Sullivan, seminar leader Paul H. Fry, and Fellow Dina K. Secchiaroli.)

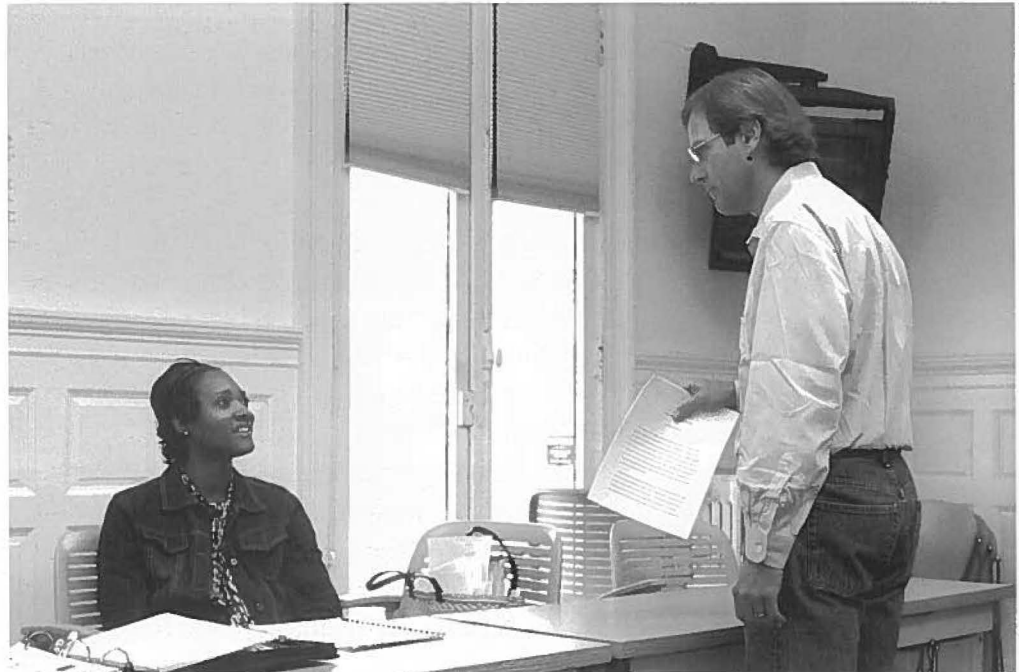
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for communicating and sharing ideas. It was also to our advantage that we were working on the same theme.

Over the years the Institute's participants and staff have been asked whether the co-professionalism among Yale faculty members and New Haven school teachers, for which the program is widely known, is authentic. The collegiality on which the Institute is founded is perhaps best illustrated by the mutual respect between Fellows and seminar leaders that the seminar experience engenders. One seminar leader said, "This experience certainly broadened my perspective and deepened my respect for school teachers." Another commented, "The balance of grade school, middle school, and high school teachers was very good, and on everyone's part there was a great deal of sympathy for and curiosity about the circumstances of others. During the last two thirds of the seminar, everyone expatiated in turn on their unit and on their teaching environment with immense mutual interest and concern." He characterized himself as "moved and heartened to be reminded that there are so many worthy, concerned, and professionally competent people in our classrooms."

The collegiality on which the Institute is founded is perhaps best illustrated by the mutual respect between Fellows and seminar leaders that the seminar experience engenders.

Fellows, too, expressed admiration for their Yale colleagues and for the collegiality that they helped to foster. One said, "As would be expected, [my seminar leader] is extremely knowledgeable in the field. At the same time, he is aware of the constraints that we have in teaching younger children and he willingly adjusted the seminar material. He is easy to work with and encourages contributions to the discussions from the Fellows." Another observed, "The seminar leader was very supportive and was always willing to offer assistance when asked. He was also very knowledgeable of the subject matter but not once was he intimidating or unapproachable. I have been rejuvenated by



Michael Mansland

The seminar on "Water in the 21st Century." (Fellow Sharron Solomon-McCarthy and seminar leader John P. Wargo.)

this intellectual exchange of ideas as I networked with other teachers. Knowing how to teach various topics has provided ways that promote effective teaching and learning. I felt very comfortable within the group and everyone's contribution was considered valuable."

Praise for seminar leaders was common among Fellows. According to one, the seminar leader "was very helpful. His knowledge and expertise were enlightening." Another "really enjoyed and appreciated" the seminar leader's "enthusiasm about the subject matter but also about our individual units." She credited him "for boosting my confidence as a teacher (and student) of science."

Another said: "My experience in my Institute seminar has been very positive this year. [The seminar leader], an eminent scholar and master teacher, presented the subject matter in a very interesting way and I found myself taking detailed notes about the various [materials] we read with plans to reread and further explore these [materials] on my own in the future. He was always very well organized and it was apparent from the very beginning that he knew well and loved the subject matter." This teacher added that the seminar leader "always encouraged Fellow participation."

A number of Fellows commented on the appeal of the Institute as a professional activity. One teacher, who was a Fellow for the second time, said, "I feel very positive about the Institute and its role in the New Haven school system. I think it is wonderful for teachers to be able to get together and work closely in an academic setting on projects that become very useful tools for teachers nationwide. The Institute is a great form of staff development." A Fellow in her third year in the Institute likewise called it "perhaps the best professional development I participated in this year." A longtime Fellow observed that the Institute, "provides the opportunity for teachers to meet and reflect on their own practice and to use the best practices in the teaching of students. Through the YNHTI teachers take ownership and responsibility of their work with students. They trust one another, feel confident about their work with each other and with students and are more apt to remain in the teaching profession." Another veteran Fellow—recognizing "accountability" as "imperative in the teaching profession"—wrote, "First of all, as a teacher, one must be committed. Along with commitment, a vision must develop that encompasses a constant reevaluation of one's teaching style and curriculum. We must be open to change, not only for the sake of trying something new, but also for trying to reach every child in the classroom." This Fellow called the Institute "a means for teachers to revitalize [their] teaching strategies and gain invaluable professional development." And a first-time Fellow, first-year teacher said, "One of the most important things the staff of [the Institute] does is to make public school teachers feel respected and acknowledged as creative, caring, educated colleagues. Teachers do not often receive this type of respect and value in our society, but it clear that [Institute] staff, professors, and participants truly see the value inherent in teaching today's youth."

"I feel very positive about the Institute and its role in the New Haven school system. I think it is wonderful for teachers to be able to get together and work closely in an academic setting on projects that become very useful tools for teachers nationwide."

—Institute Fellow

Relating Seminar Topics to Curriculum Units

Each Institute seminar must balance the complementary and inseparable but sometimes competing demands for studying the seminar topic and developing specific applications of that knowledge for school classrooms. The Fellows, coming from elementary, middle, and high schools, are obligated to develop curriculum units that have some demonstrable relation to the seminar topic, but they are free to work out curricula that enter territory not covered in detail by the seminar. The curriculum units, therefore, have a diversity of subject and approach that one would not expect in a regular university course on the seminar topic. As a result, discussions in the seminar, while doing justice to the common reading, can also range widely over substantive and pedagogical issues relating to the curriculum units. Some comments by seminar leaders and Fellows quoted earlier have already indicated that each seminar approaches these demands somewhat differently as seminar leaders strive to strike an appropriate balance.

The Institute increasingly encourages Fellows to build into their curriculum units both subject matter and skills that are called for by the local curriculum framework—including a strong emphasis upon literacy.

The Institute increasingly encourages Fellows to build into their curriculum units both subject matter and skills that are called for by the local curriculum framework—including a strong emphasis upon literacy—and the statewide Connecticut Mastery (CMT) and Academic Performance (CAPT) Tests, administered in grades four, six and eight, and ten, respectively.

One Fellow explained the context in which she created her unit as a tool for student learning:

The New Haven Public Schools' fifth-grade curriculum focuses on developing the students' ability to use active reading strategies to form an initial understanding of a literary work. 'Initial understanding' is a term that encompasses the ability to identify themes, character motivations and development, setting, main ideas, and the practice of before, during, and after reading strategies. The student must convey ideas both orally and through the written response. In addition, students should be exposed to experiences, vocabulary, and cultures that are unfamiliar with them.

Other Fellows elaborated on the purposeful connections between their Institute curriculum units and academic standards:

The curriculum unit and my participation in the Institute will help me teach the students curriculum at a concise, timely pace. I have integrated many of the subjects that I teach. A few standards will be covered at the same time: social studies and science, math and science, and social studies and language arts were integrated. The Institute has also given me the time to look at my curriculum and see where I needed to make improvements. I have taken my weakest subject areas and placed them in this unit so that I would be able

Annual Report: Relating Seminar Topics to Curriculum Units

to teach them with more ease and success. I have also combined my strong subjects with the areas [where] I need reinforcement and I hope to be able to cover all the standards in my curriculum with more success this coming year.

This unit covers many performance standards in the Language Arts Curriculum Framework, from reading and writing skills to listening and speaking skills. I have come to appreciate the role that poetry study can play in enhancing writing and plan to develop activities joining the two types of writings and noting their similarities and the ways they complement each other. Clearly, this unit will enhance the school curricula.

Ultimately, more than two thirds of this year's Fellows (73 percent) said that there had been a successful balance in seminar between general study of the seminar subject and Fellows' work in progress on their units. As one Fellow described, "[The seminar leader] was enthusiastic about the subject matter, willing to share his own experiences and knowledge, and helped guide/edit and offer constructive criticism throughout the development of my curriculum unit." A seminar leader recalled how, early in the process, "I met each participant for an intense discussion of his/her project" while at the same time the group began pursuing "the common work I had planned for our sessions." As the weeks passed, "it became evident that attention needed to be turned to the successful and imaginative completion of the individual units." He concluded, "I think a good balance was achieved."

After the units were completed in July, they were compiled in a volume for each seminar. In October the volumes were deposited in the libraries of all

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—Institute Fellow



Peter Casolino

Fellow Lorna Edwards and her student at Betsy Ross Arts Magnet School.

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elementary, middle, K-8 and high schools, so that New Haven teachers, whether or not they have been Fellows, might use them in their own teaching. As in the past, the Institute prepared a *Guide* to the new units, based on authors' synopses and recommendations of the grade levels and school courses to which their units apply.

The Institute also updated the *Index* of all the 1438 units contained in the 160 volumes the Institute has published since its inception in 1978. The *Index* and *Guide* also were deposited in all school libraries and distributed to the teachers who serve as Institute Representatives for the schools. A full set of the new curricular resources was provided to those school district administrators who have responsibility for curricula system-wide.

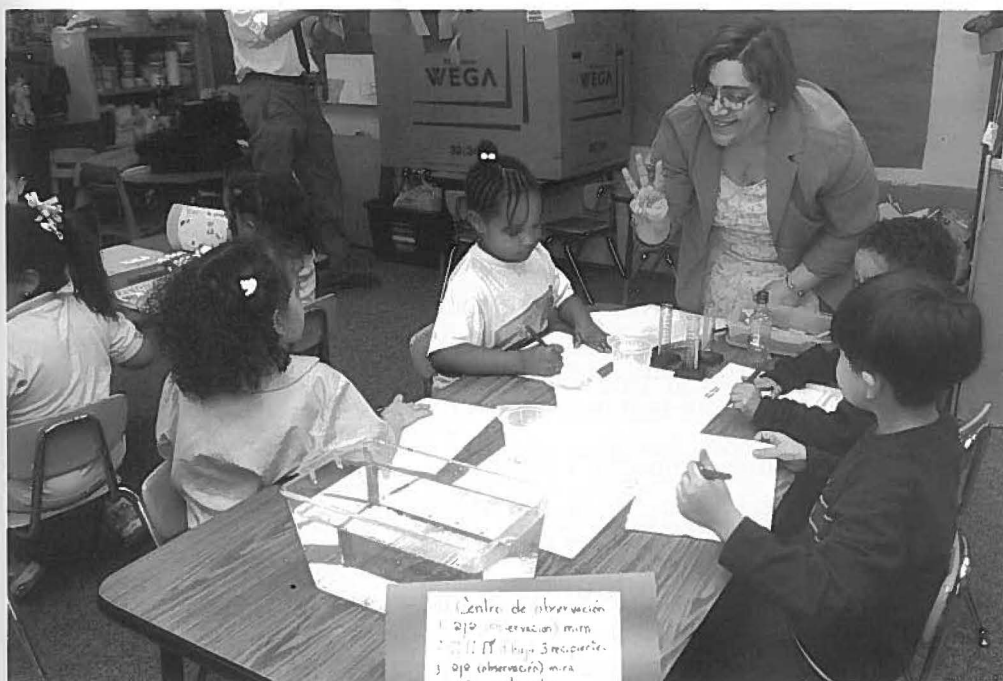
Maintaining a library set of units has proved most difficult in those schools that do not have a full-time librarian or, in some cases, even a library. In 1993-94, the Institute therefore sought to determine the best location for Institute material to be deposited in every New Haven school. It has since continued to supply units missing from any collection, based on surveys distributed annually to schools, insofar as the volumes remain in print. As described below, the Institute has also created an electronic version that makes its curricular resources more widely accessible.

Results for the Participants

Nearly all said that they had gained knowledge of their subject and confidence to teach it by participating in their seminar.

Fellows in 2003, as in past years, spoke of the results of their Institute participation, particularly in terms of intellectual growth and renewal. Just as the opportunity to increase mastery of the subject one teaches was an important incentive for most Fellows (93 percent) to take part in the Institute, nearly all (95 percent) said that they had gained knowledge of their subject and confidence to teach it by participating in their seminar. No Fellow disagreed with the statement that the seminar helped with intellectual and professional growth.

Many Fellows described the Institute experience—including the research and writing of curriculum units—as having increased their professional confidence and morale, while nourishing their curiosity. They spoke of this confidence both generally and in terms of greater mastery of a particular subject. One Fellow wrote of being "confident that I can put together interdisciplinary units much more readily after taking this seminar." According to another, "Teaching this unit is going to allow me to try some new teaching strategies and content. Physics is a challenging subject for me and implementing my unit will allow me to feel more confident about teaching science in a K-4 environment." Another observed, "Writing a [Teachers Institute] unit has given me a boost in confidence that will help me to feel more clear and confident in my teaching. I have also gained experience in research and crafting a curriculum, which I can use throughout my future in teaching." She added, "I'm proud of my unit and excited to bring it into my classes."



Michael Mansland

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Implementing my unit will allow me to feel more confident about teaching science in a K-4 environment.”

—Institute Fellow

Fellow Abie L. Benítez teaching her Institute curriculum unit to students at Columbus Family Academy.

Others said:

I feel that my curriculum unit will equip me in being a more effective teacher. In the past, my students have been very inquisitive. They often want to know more than the textbook provides. I feel that my research will allow me to fill in some of the areas that the book does not explain. I also feel that the unit will save time in the future. Before I teach a lesson, I often have to research the topic on my own to get a more complete picture of the events. I will be prepared in that search when the time comes to teach this unit. I will be more confident as I stand before my students knowing that my information is accurate.

I am very excited about teaching my curriculum unit on poetry to my class in the fall. Through my research I have learned a great deal more about teaching the reading and writing of poetry to children, combining it with more creative movement and music. I have a new confidence in teaching free verse poetry and look forward to introducing it to my children. I have, for years, taught haikus, cinquains, limericks and the like and now I can add another type of poetry to my list.

Fellows spoke, too, of the access to Yale facilities they had gained from participation. From the Institute's inception, all Fellows have been full members of the University community, listed in the directory of faculty and staff,

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and granted use of facilities and services across the campus. For most Fellows (80 percent) access to Yale's academic facilities such as the library was an incentive for their participation, and 73 percent reported that membership in the Yale community had been greatly or moderately useful to them.

In 2003 the Institute arranged four special campus tour and orientation events for Fellows, in addition to a computing workshop and to the program talks and seminars themselves. These special events, conducted by professional staff of the respective facilities, occurred on the following dates and in the following venues at Yale:

- April 2, Sterling Memorial Library
- May 1, Beinecke Rare Book and Manuscript Library
- May 15, Yale University Art Gallery
- June 5, Yale Center for British Art

Fellows reflected upon these and other opportunities. One said: "It was a great feeling attending class in the Yale University building, listening to Yale faculty and using the Yale facilities—library, computer labs and parking lot." According to another, "The resources that Yale provided were amazing. I made use of the film library as well as information provided by the Film Studies Program on the Internet." A third "particularly appreciated the extra visits set up to acquaint the Fellows with the Yale libraries and art galleries." And a fourth was "very pleased to have access to Yale's wonderful libraries, which I use all year long. It is indeed a privilege, which I value very much."

"It was a great feeling attending class in the Yale University building, listening to Yale faculty and using the Yale facilities—library, computer labs and parking lot."

—Institute Fellow



Michael Marsland

Fellows visiting the Yale University Art Gallery.

Annual Report: Results for the Participants

On July 8, near the conclusion of the year's seminars, the Institute held a reception for Fellows and seminar leaders in the courtyard of Yale's Hall of Graduate Studies. Several Fellows commented about this event. One said, "I attended the reception and appreciated the opportunity to gather with friends over good food and drink." Another "especially liked the addition of the reception at the end of the program. It was nice to get back together as a group and remember we're all in this together."

Fellows see the results of the Institute as extending beyond their own classrooms, and beyond the teachers who have themselves personally participated in the seminars. Almost all Fellows said that they plan to encourage or assist other teachers in using the unit they prepared; more than half said they planned to do so with three or more other teachers. As a group, the Fellows planned to encourage or assist a total of 144 other teachers.

As in the past, Fellows discussed the more extended influence the Institute has had, and will have, for themselves and their schools. One "believe[s] participation in the Institute has made me a better teacher. I feel I have new tools now to bring into the classroom." This Fellow "hope[s] my colleagues will join me in the implementation of the unit. This will make my principal happy as well, so the Institute will be touching people that have never even been members!" He concluded, "This seminar has also opened my eyes to other cultures"; it "was a wonderful and insightful seminar that makes me a wiser, more mature and a better teacher." Another said, "This year, in addition to classroom use, I intend to incorporate my unit into an after-school program. It is my hope that student enthusiasm will serve as a springboard for other colleagues to get on board in implementing the unit!"



Reception celebrating the end of the 2003 program held in the courtyard of the Hall of Graduate Studies.

"Participation in the Institute has made me a better teacher. I feel I have new tools now to bring into the classroom."

—Institute Fellow

"I will approach this topic with more confidence than in previous years because of the knowledge that I gained from the seminar leader, other colleagues, and by my conducting research."

—Institute Fellow



Fellow Waltrina Kirkland-Mullins with her students at Davis Street School on the occasion of her being recognized as the New Haven Public Schools' 2003-2004 teacher of the year.

One Fellow "plan[s] on sharing my unit with the other first and second grade teachers in my school," while another said her unit "combines the science themes of my school," which "will greatly affect my students" and could "allow for my school to look at interdisciplinary instruction in a new way." Another "believe[s] [her] curriculum unit can assist other teachers with their subject matter"; this unit "has many facets that all teachers can take a portion of and expand on." She "believe[s] it is important to share my curriculum with my colleagues because not only can they learn from me but I can learn from them."

Another Fellow elaborated:

I know that I will approach this topic with more confidence than in previous years because of the knowledge that I gained from the seminar leader, other colleagues, and by my conducting research. The teachers on staff who work with my students are aware of my plans and became involved while the curriculum unit was being developed. As a matter of fact, we have already tried out some of the subject matter and strategies in the classroom and are very anxious to refine the unit. Teaching interdisciplinary units encourages communication among staff as they work together for the good of their students. In preparing the unit, I also became conscious of the existence of other units created by Fellows of the Institute. . . [units] which will definitely be used in future lessons.

Each year we are attentive to the responses of both first-time and veteran participants because we want a high proportion of New Haven teachers to

become Fellows and we also want the Institute to become a regular part of Fellows' professional lives. Both groups cite their own rewards, with many first-time Fellows especially appreciative of the example and guidance of Institute veterans.

One newcomer called her participation "a very rewarding experience. I was afforded the opportunity to work with Yale faculty and meet other teachers throughout the New Haven community." She wrote that her "intellectual curiosity has been re-ignited and I am very confident that both teachers and students will enjoy the topic I have researched. The seminar leader enjoyed working with us, and everyone in the seminar gained significantly." Another—who regarded "the other Fellows who had previously participated in the Institute" as "extremely helpful"—said, "Overall it was very positive. Although there was a lot of work, in the end it was all worth it—everything from the seminar leader to the [other] people in the seminar. It is a program that I will apply to again in the future."

Similarly, a third said her seminar "allowed me to network with other teachers in my seminar that had previous experience in other seminars. So they were able to share their experience with the group and assist the new members in the procedural process of writing our curriculum unit. I found that to be favorable." She continued:

There was an organized agenda and many useful resources extended to us. At the beginning of the Institute we were able to partake in an array of all the seminars [through the lecture series]. I liked this because I could gather some information for future research and mingle with other colleagues within our district. Next, we attended our own seminar where we specialized in the area of our own interest. . . . Each week was a building block upon the week before. I really enjoyed the small group setting because everyone was able to share and not feel overshadowed. [The seminar leader] really listened to all of our ideas and he made us go to the next level of thinking. [He] was down to earth and an expert in his field. Not only did he lecture but we saw videos and went on field trips. . . . I loved this seminar. I would be honored to recommend the Yale Institute to any of my co-workers.

"I really enjoyed the small group setting because everyone was able to share and not feel overshadowed. . . . I loved this seminar."

—Institute Fellow

Other first-time Fellows wrote:

My experience in the Institute was very positive. Being my first year in the seminar I didn't know what to expect. The group of people I have met, including my seminar leader, were wonderful. Everyone was willing to help in any way possible. I was also able to discuss different aspects of teaching with a diverse group of people, which I would usually not get the opportunity to do. I would recommend the Institute to others in the future.

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My experience in my Institute seminar was very positive this year. I have gained knowledge of several basic physics topics. I also will be taking many demonstrations and experiments back to my classroom in addition to the unit that I produced. Interactions with my leader and other Fellows was also beneficial to my continuing growth as a teacher.

"I have gained knowledge of several basic physics topics. I also will be taking many demonstrations and experiments back to my classroom in addition to the unit that I produced."

—Institute Fellow

I had a wonderful experience of the Yale Teachers Institute. My [seminar leader] is a very knowledgeable professor and an exceedingly kind person. I loved getting together each week with other teachers who are interested in continually learning and challenging themselves. I enjoyed our group of teachers. . . . [and] I learned some important classroom management skills from the way in which [the leader] kept the class moving along while addressing [one individual's] concerns. I actually learned a lot about classroom management from watching their exchanges. . . . [The seminar leader] is a careful reader and an expert editor. He helped me to craft and refine my unit in ways I feel good about. I wish he could look over all my writing! I did use Sterling Library and the Yale film library quite a bit. I really appreciated having these resources available.

Among the teachers who were participating in the Institute for the first time were the eight individuals in the Beginning Educator Support and Training (BEST) program who were in their first year of teaching in Connecticut, as well as several who were in their second year of teaching.

As discussed above in the section of this report on the Fellows' Application and Admissions Process, the BEST program is a State of Connecticut requirement for new teachers. In 2004 the Institute continued a pilot effort to involve and support first-year teachers. At the conclusion of the program, one of them recalled, "Going through the Institute process was similar to BEST. That aspect was helpful. The learning and connections that are part of the Institute were very helpful also."

On June 3 the seminar Coordinators organized a discussion over dinner after that day's seminar meetings to recognize and encourage the new teachers participating as Fellows. The new teachers spoke with other Fellows about their experiences in the Institute and in their schools. The event was an opportunity for the experienced Fellows to congratulate their newer colleagues for participating in the Institute during their challenging first year of teaching, to invite them to seek guidance from veteran Fellows who had endured similar challenges, and to reflect with them on teaching in New Haven.

Several of the 2003 Fellows who were first- or second-year teachers were among the most enthusiastic participants in the Institute. A number of them explicitly credited the influence of seminar colleagues. One observed, "The

advantage of participating in the Institute is that you open yourself to older, more experienced teachers who can contribute to your effectiveness in all regards. I'm not certain what the disadvantages would be except for the deadlines and the added pressure of writing a unit." He said, "I think that my involvement with the Institute has helped me to prepare for this year. I have a much better idea of how to present materials to my students and that comes in large part [from] seeing how the other teachers in my seminar present ideas to their students." A second "adored" her "experience with the Institute." She said, "Yale was extremely supportive. Although I didn't take advantage of all of the resources, it was wonderful to know that they were there and we were welcome to them. Communication was well-done and clear. I enjoyed the beginning meetings where the other [seminar] leaders presented. I liked having all the Fellows in a room together for the solidarity and possibility of interaction." This teacher "plan[s] on teaching and expanding on a sub-unit of my unit for my BEST portfolio." A third new teacher wrote that "The Institute was very supportive as I was writing my portfolio. I was able to ask other Fellows for their input. Experienced Fellows were also helpful in giving guidance."

Another said, "This attempt to utilize the resources at Yale for the benefit of the New Haven teachers is laudable. It is evident that a lot of groundwork and planning is involved," and "this curriculum unit has disciplined me regarding the use of time, readings and research on the Web. The existing curriculum units do give leads as to how units are created." She added a comment on the Institute's role in the recruitment and retention of district teachers: "The Institute is certainly a bait to hook new teachers to work for the City of New Haven. It offers professional development and an incentive at the end. It is also influential in retaining existing teachers who enjoy an unrivaled opportunity!"

Another wrote:

I am a first-year teacher and feel privileged to have had this opportunity to participate in the Yale Teachers Institute. I am starting this career feeling inspired about teaching. The [Institute's] staff and professors do an incredible job of making public school teachers feel proud of the work they do. I feel [the Institute] helps to legitimize the work of a teacher as the creative and academic job that it is. It felt very good to me to sit in a Yale classroom with a Yale professor each week. It also builds my confidence to know that I have now had my unit published through the University—my thoughts and my work are important. One of the best aspects of [the Institute] is that teachers are absolutely encouraged to develop a unique curriculum. This affords teachers a freedom of academic exploration they don't always enjoy at their jobs. Time spent at [the Institute] benefits the teacher, their students, the school they teach at, and the New Haven community at large. In how many towns do public school teachers study at one of the best universities in the

"The Institute is certainly a bait to hook new teachers to work for the City of New Haven. It offers professional development and an incentive at the end. It is also influential in retaining existing teachers who enjoy an unrivaled opportunity!"

—Institute Fellow

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world and then bring what they learned directly into their classrooms? I can't say enough about what a positive and beneficial program [the Institute] is.

A second-year teacher wrote:

I feel that the YNHTI providing support for new teachers is a good thing. For teachers who are part of the BEST program, more support in a positive and consistent manner should be provided. Teachers are interested in getting together and sharing their good and bad times and [in talking] both formally and informally about their work. The seminar setting and unit writing is an excellent way to produce a good product. The hands-on approach symbolizes the experiences and work needed to understand the making of a product that teachers can creative for their [State-required] portfolios and serve as a springboard for good classroom teaching. The bottom line is that the more teachers feel respected and supported in their work, they feel secure and confident about their knowledge, skills, talents and other resources they provide to students.

"The more teachers feel respected and supported in their work, they feel secure and confident about their knowledge, skills, talents and other resources they provide to students."

—Institute Fellow

The Institute surveyed the new teachers among the 2003 Fellows to learn how best to involve them in its work. The results were encouraging. Perhaps the clearest evidence that new teachers see value in the Institute is that, by the fall, nine of the twenty-one school Representatives had two or fewer years of experience in teaching as the academic year began. We will continue to track the ways in which seminar participation and unit development may assist such new teachers in particular—and will use this information in planning future recruitment and support efforts. We will consider how the teaching of Institute curriculum units should be scheduled in relation to the State of Connecticut's portfolio requirement, and how to ensure mentoring of new teachers within the seminars in a way that more consistently complements the mentoring structure that the district has established. The coordinator of the pilot initiative in 2003 was herself a Fellow for the fourth consecutive year. In planning for 2004, a third-year teacher who was a Fellow during his first two years of teaching began assuming this leadership responsibility along with another Representative and member of the Institute's Steering Committee, who himself is one of the Representatives who have volunteered to undergo formal training as mentors to new teachers in the New Haven Public Schools. In this role, they advise and support colleagues both in the classroom and in the creation of their portfolios. Involving more such mentors in the Institute promises to help integrate the Institute and the district's own professional development for new teachers. According to one Institute veteran, "Documenting the positive experiences of first- and second-year teachers who complete a unit, whether or not they use it in the BEST program, builds a positive resource for attracting new teachers by showing that it is possible to have a positive experience in the Institute even while facing the challenges of first and second year teaching."



Fellow Stephen P. Broker and his students at Wilbur Cross High School.

*"Being a part of the
Institute fires me
back up to go back to
the trenches at the
end of the summer.
Can anything be
more important?"*

—Institute Fellow

For returning Fellows, the rewards of participation do not diminish over time, because the experience becomes cumulative, rather than repetitive or redundant. Many teachers report that the rewards increase as one has more experience as a Fellow. As with newer Fellows, many consider the nature of the Institute as a learning community to be a distinct benefit, too. One returning Fellow wrote that "The Institute continues to serve as an empowering resource for New Haven instructors" and likes "the way we revisit ourselves to pump it up a notch each year. I am particularly pleased with this year's expansion of seminar topics; it was difficult to select one because each topic was so enticing!" Another commented, "This year, as in previous years, my professor has been very supportive in helping me to produce a unit that is ready for publication. I appreciate all of the time and effort that has gone into making my unit of professional quality."

According to a teacher at the high school level, "Being a part of the Institute fires me back up to go back to the trenches at the end of the summer. Can anything be more important?" She observed:

My students respond well to active learning. Every time I create a unit, I try to create a balance between various kinds of learning. I think I have succeeded in this unit with: a field trip, each student putting together a book, students gathering data on graphic organizers, students writing a formula five-paragraph essay and students learning visual literacy through viewing films that are set in very different geographical locations. I also have tried to create a bal-

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ance between teaching *content* and *skills*—both are critical and should complement each other. The Institute has once again created an environment where I am encouraged to expand my passion for creating the kind of unit I described above, one that the at-risk students in my school will enjoy and learn from. It is physically and mentally challenging to work with urban students who do not have the skills and confidence to succeed in school. Teachers who work with these students need opportunities to explore and create strategies for working with them. The Institute gives us these opportunities.

Another Fellow wrote:

Participation in the Yale Institute and in this seminar is going to give me a new avenue to explore with my students. This will help me to expand the social studies curriculum which centers on the community to include study of our water supply and where it comes from. I think that a discussion like this can really help students get the idea of what a community is and how important it is to take care of its resources. As always, when I get to try out something new in my class, it increases my enthusiasm and I find the feeling usually rubs off onto my students. This topic is an important one for all of us, and the unit will hopefully begin to let students see that they must be involved in what happens in their neighborhoods. I hope that by teaching the unit I can offer some ideas to other teachers on my grade level and share some of the activities with them. This unit also stresses science and our students love doing projects and experiments. We will also use ideas from the unit to do a class project for the science fair.

"When I get to try out something new in my class, it increases my enthusiasm and I find the feeling usually rubs off onto my students."

—Institute Fellow

Every year since 1990, when they became a regular part of the Institute, elementary school teachers have spoken of the advantages of the Institute for them and their curricula specifically. We have already quoted several elementary school teachers. Another one said, "My unit centers mainly on reading and writing skills. However, all of the curriculum areas will be addressed in my unit so that the children are gaining knowledge and successes in all of the disciplines." This Fellow was "encouraged by the fact that the other two first-grade teachers in my building have team taught two past units that I have written through the Institute. They are asking if we could possibly include a third unit." Another Fellow, even while maintaining that "we did not discuss enough age-appropriate children's material," concluded "overall I enjoyed" the seminar, whose leader "led me to think about [the subject] in different ways."

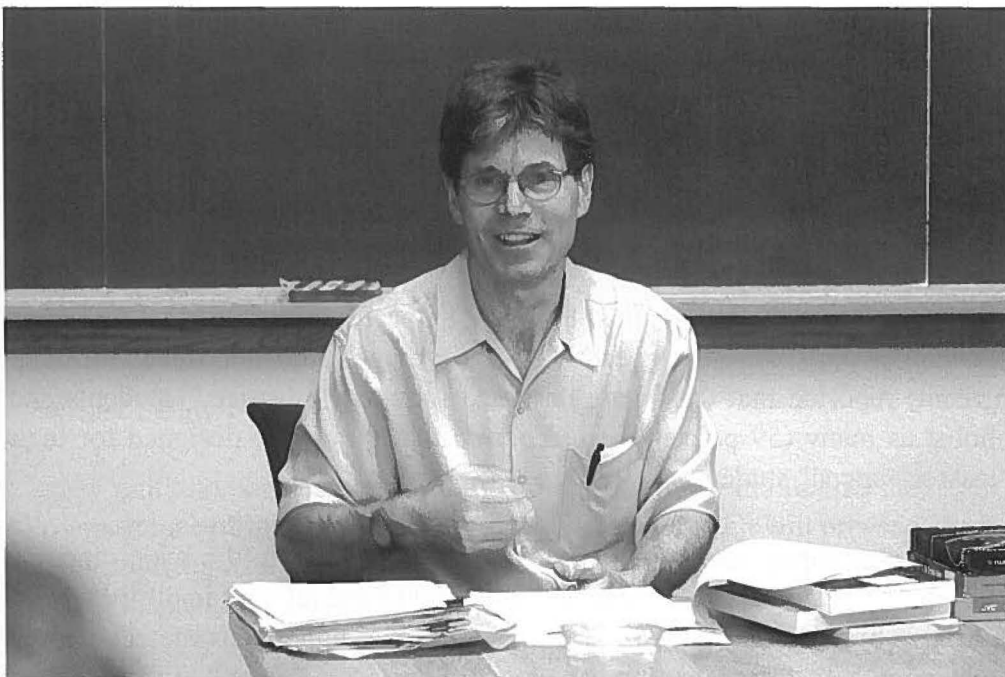
Seminar leaders, too, speak of what they gain from participation. They not only recognize their growing involvement in public education and the

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University's home community, they also find that there are often benefits accruing to their own scholarship and teaching. Presenting their accounts is especially important because the Institute is often asked to explain the incentives and rewards for Yale faculty members who participate. One seminar leader this year said: "The experience fosters an appreciation of what it's like to teach in the trenches that can't be had by any other means." He added, "We are reminded, in particular, how important it is to start at the beginning and take nothing for granted." Another said, "Having the seminar in my own building raised the grad students' awareness of the New Haven community." He continued that he had assembled materials that "will benefit my teaching of undergraduate and graduate" courses.

A third seminar leader wrote:

I became acutely sensitive to pedagogical issues and tactics. I expect I'll now think much more deeply about ways to present material in my Yale classes. Most Yale students scarcely need such aids to study, but the classes at Yale can become an 'adventure' (as so many Fellows characterized their teaching). I also learned a great deal about organizing my own syllabi and writing projects. The fastidious program of steps and stages that the Fellows put themselves through could be of value to me. Naturally I have my own form of self-discipline, but I learned some tricks and some motivation from these dedicated teachers. Their concern with moral issues was not lost on me either. At all grade levels, the purpose of knowledge and education should be more than inculcation of information.



Michael Marsland

"I became acutely sensitive to pedagogical issues and tactics. I expect I'll now think much more deeply about ways to present material in my Yale classes."

—Seminar Leader

The seminar on "Geography through Film and Literature." (Seminar leader Dudley Andrew.)

Teams of Fellows

For the past ten years the Institute has admitted teams of at least three teachers from the same school to a seminar with the expectation that the team members would work as a team. They would coordinate their curriculum units and work together during the school year, planning cross-grade and cross-department instruction and culminating school-wide activities, such as assembly programs, science fairs, or some kind of publication. Each team member, however, must write a unit that could be taught independently. This program, highly successful in several schools, has encouraged teachers who were previously reluctant to participate in seminars on an individual basis to apply to a seminar as part of a school team.

One team of Fellows emerged during the Institute applications and admissions process in 2003. The team, from Beecher Elementary School, took part in the seminar "Poems on Pictures, Places, and People" and focused their units on poetry and music. One Fellow, a first-grade teacher at the school, examined the poems of Jack Prelutsky. A colleague—likewise a longtime Fellow and a teacher of third and fourth-grade students—developed a unit on Shel Silverstein. These two teachers are leaders of the Institute Center for Curriculum and Professional Development in Beecher School, and they continue to invoke the Center as an anchor of collaboration among teachers there. They recruited a first-year colleague who teaches music to participate in the seminar, and he prepared a unit integrating poetry and music. These teachers, and other colleagues from the school, held a related assembly for students in December and expect to orchestrate another culminating activity during spring 2004.

Benefits for Students

The ultimate purpose of the Institute is to strengthen teaching in New Haven's public schools and in this way to improve student learning throughout the schools. Contrary to what some would expect of a partnership involving Yale University, the Teachers Institute intends to serve students at all achievement and performance levels. Fellows often, in fact, write their units for students at more than one level. While most Fellows (85 percent) reported that their new curriculum units were designed for their "average" students, three fifths (63 percent) reported that they were designed for their "advanced" students and almost as many (59 percent) also reported that they were designed for their "least advanced" students.

Excerpts from the plans of several Fellows illustrate the wide range of unit use in the schools. One teacher "intend[s] to use my unit in all five classes I have been assigned for 2003-4, including two honors advanced anatomy and physiology classes, two human physiology classes, and AP Environmental Science. I will have my students conduct original research." Another's unit

The ultimate purpose of the Institute is to strengthen teaching in New Haven's public schools and in this way to improve student learning.



Fellow Ralph E. Russo and his students at Wilbur Cross High School.

"With this unit of study, it is my intention to provide information that gives the students a better feel for our history."

—Institute Fellow

"will allow my students to gain a better understanding of history by making a connection to the past on a local level. It has been my experience that students often feel disassociated from American history. They have, at times, no real connection to the past. With this unit of study, it is my intention to provide information that gives the students a better feel for our history."

A Fellow in the "Geography through Film and Literature" seminar said:

This seminar will have a wonderful impact on my teaching and my students. At my school, we teach in a 90-minute block. While simply 'showing a movie' is not the solution to block-teaching, insightfully analyzing another culture through the films indigenous to that region or nation can be an excellent way to capture and maintain students' attention for such long periods. Diversification in a teacher's approach is essential for success in a 90-minute block period. This seminar will help me next year as we go to a full block schedule.

Other Fellows wrote:

My unit and participation in the Institute has made me realize the importance of focusing more time on science. My unit will provide my students with a hands-on approach for gaining knowledge in the area of physics.

The unit I wrote fills a hole in my curriculum. My teaching is more informed and purposeful, so my students will comprehensively

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learn how to analyze poetry in a more effective way than I had been doing. My unit aligns with district goals and strengthens our department.

I really am looking forward to teaching my unit next year. I have tried out some of my ideas on this year's class and have found the response to be very positive. Not only do I hope to increase my students' appreciation of poetry, but also I hope to further their general writing skills, especially narrative and poetic. I will be teaching my unit in a third-grade classroom with their teacher who is looking forward with the same positive anticipation. Since my unit is part of a team, some of my material will be shared with at least one other room. There are possibilities that the sharing could go further, but this will have to wait until the team resumes their planning in the fall. There will also be a culminating activity, which will involve other students and parents. Generally I feel that my unit, and the team as a whole, will have a very positive effect on much of the school.

"My school curricula will be enriched with a stronger knowledge in environmental science."

—Institute Fellow

My participation with the Institute will impact my teaching and my students because I plan on teaching the unit in the upcoming school year. The unit is a new teaching style for me to try as it is more events-based/inquiry-based and though I have taught single lessons in this style, I have never taught an entire unit in this style. My students will be challenged to think independently to solve problems. My school curricula will be enriched with a stronger knowledge in environmental science.



Peter Casolino

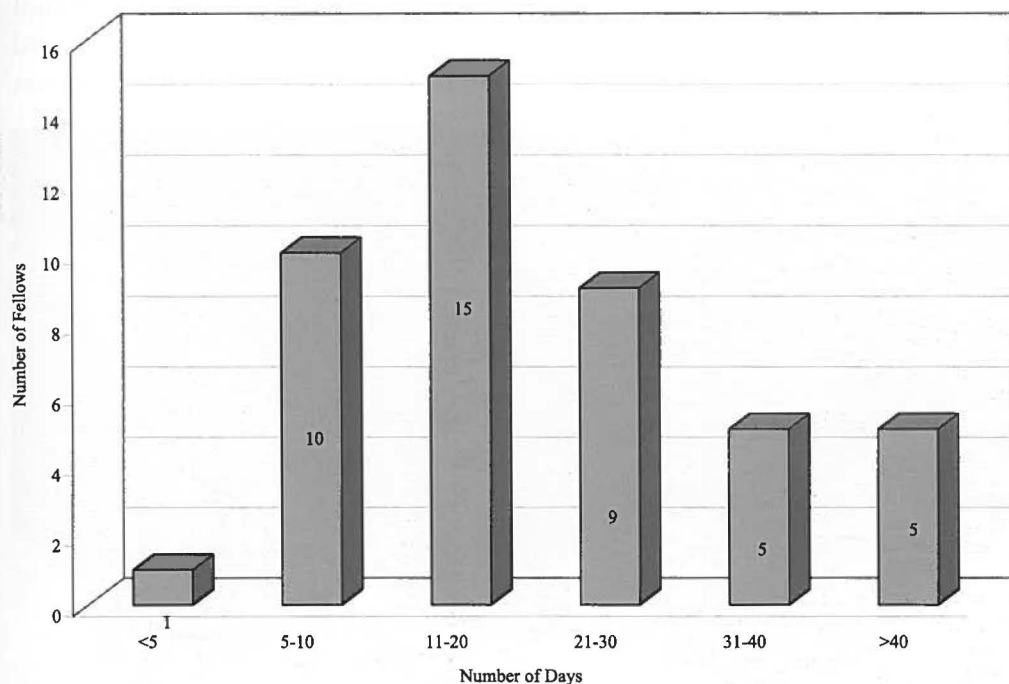
Fellow Deborah A. James and her student at Betsy Ross Arts Magnet School.

One Fellow commented on the significance of the Institute for students with disabilities. This individual "developed this unit because science is very difficult for blind and visually impaired students and there are few curriculums that take into account the problems they encounter. This unit will allow my students to team with their sighted peers to explore scientific issues and collect and interpret data about their environment." According to this Fellow:

This curriculum unit will greatly assist my students in understanding environmental issues in their community. Long Island Sound is important to New Haven, and its health and well-being need to be understood by the students living along its shore. This curriculum will help students relate to this environmental treasure.

To attempt to gauge the impact of this year's units in New Haven classrooms, we asked Fellows about the number of students to whom they planned to teach their new unit, and on how many days. Forty-four of the forty-six Fellows who completed the Institute planned to teach their unit to 20 or more students; half of that group said that they would teach their unit to 50 or more students. The total number of students to be taught a unit by this year's Fellows is nearly 2500. Chart 6 indicates the lengths of time the Fellows planned to teach their units. For almost all Fellows, the unit is a significant part of their teaching plans.

Chart 6
Number of Days 2003 Fellows Plan to Teach Their New Unit



For almost all Fellows, the unit is a significant part of their teaching plans.

As in past years Fellows were optimistic about the responses they anticipate receiving from their students to the material they had studied and developed in the Institute. Nearly all (93 percent) of the Fellows responding agreed

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that, as a result of Institute participation, they have a higher expectation of their students' ability to learn about the seminar subject. We have already quoted some Fellows who spoke about how their own enthusiasm for a subject would motivate students, and how they planned to involve students more actively in classroom learning. Another "feel[s] empowered to teach what I have longed to expose my students to for quite some time." This Fellow "know[s] that [the unit] supports the educational standards put forth by the New Haven Public School system" and "hope[s] other teachers will see the value of these units and utilize them in their curricula, too." She is "excited to know that I will be able to take field trips with my students in order for them to gain personal experience with water quality and see what affects their water and for them to realize that they will be able to aid in preventing water pollution." A colleague observed, "Based on previous experience I find that if I choose a topic that the students can relate to on a personal level, they gain an awareness that is invaluable. It is at this point they are not only students but teachers to their peers and their parents."

We also asked Fellows who had participated in the Institute in prior years to report on student responses they had actually observed when teaching units they had previously developed in the Institute. Their retrospective comments often echoed their optimism about using their new units. One said, "The students are more excited about the units because I am. I'm so involved in them and invested in them, my enthusiasm is contagious. Further, I know so much more about the background of my units." A second wrote, "My students have been able to explore new concepts and ideas that are not included in the regular district curriculum. Therefore, the curriculum was enhanced and the school community has been able to enrich their educational experience." A third believed "The other year I did this the results were positive. My teaching has

"The students are more excited about the units because I am. I'm so involved in them and invested in them, my enthusiasm is contagious."

—Institute Fellow



Peter Casolino

Fellow Zoila M. Brown and her students at Betsy Ross Arts Magnet School.

become stronger. The kids have been writing much more and thinking more critically." A fourth recalled, "Some of the younger students in my school have walked into my class while court trials [in connection with a previous unit] have been going on, got involved, had to leave and return to their own classes and said they couldn't wait to be in my class so they could have the same experience. This is when I know my participation in the Institute has paid off."

According to another Fellow, "When I teach the Institute units that I write, it is always exciting because the units always depart from the very traditional lessons that the students have grown to expect. They usually respond positively because I always build in hands-on activities that actually teach them processes and content." She continued, "I guess the most interesting lesson we did was comparing the two paintings that I had mounted on slides," and "students responded enthusiastically to this exercise."

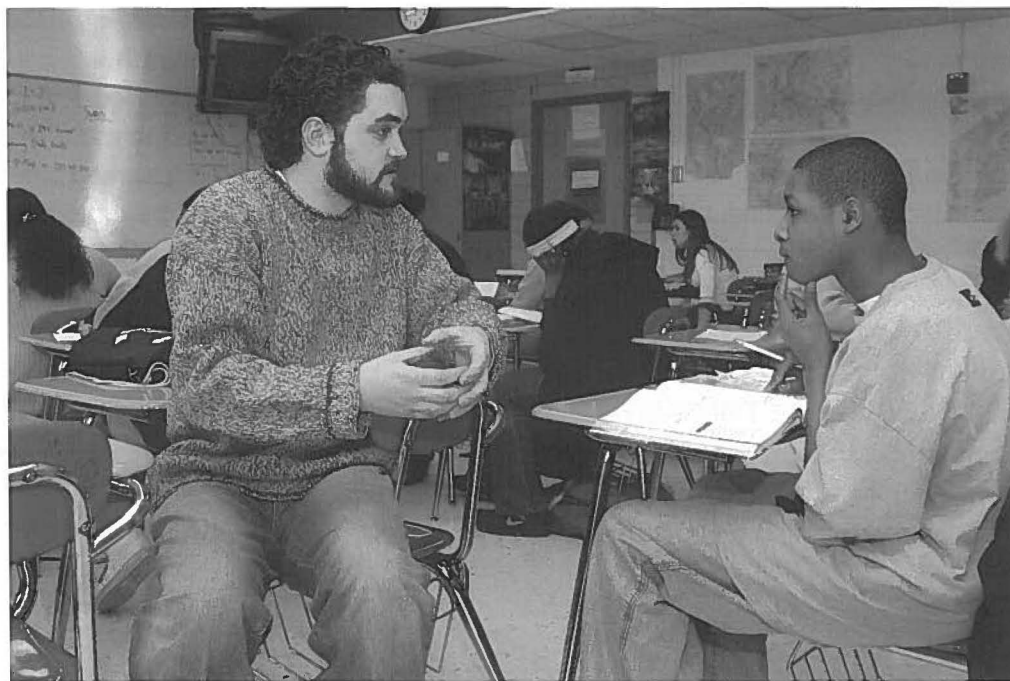
Others wrote:

I have created several YNHTI curriculum units over the years, each of which has been implemented and well received by students and staff at my school. The use of Institute resources and implementation of related units have been included in our Comprehensive School Plan. Students are excited and engaged in learning as a result of the implementation of the units. Colleagues are showing an interest in or have bought into participating in the Institute program. Over the years, YNHTI has stood tried and true, and I am simply blessed to be part of this collaborative initiative! In the past, my students have received my units enthusiastically. I believe that this is because they were receiving the required skills in a creative way. In these days of short attention spans due to video games and television, the teachers must constantly look for fresh ideas to present the material. The units provide us with the opportunity to do this. My units in the past have always tied in nicely with the curriculum and I always involve teachers from other subject areas. This results in closer ties between the teachers at the school. It also allows the students to see how their studies tie in with one another.

In past years I have taught my curriculum units with great success in my classroom. I was highly motivated to teach the units, as they were the ones I had totally designed and my enthusiasm quickly spread to my students. I also had the opportunity to introduce subjects to my students that I might not have otherwise attempted, like Islamic art and architecture and Egyptian mythology. As a result of all the work involved and research done in preparing my unit, I came away with a stronger confidence in teaching it. . . . The curriculum is also enhanced because you are able to address many subjects at one time when your unit is designed in an interdisciplinary

"I have taught my curriculum units with great success in my classroom. I was highly motivated to teach the units, as they were the ones I had totally designed and my enthusiasm quickly spread to my students."

—Institute Fellow



Fellow David DeNaples and his student at Wilbur Cross High School.

“Another plus, which is actually available to all teachers, is access to other teachers' units either online or on the shelves of your school library. There is a wealth of information in those curriculum units.”

—Institute Fellow

way. . . all in one unit that you know the ins and outs of. Another plus, which is actually available to all teachers [whether or not they are Fellows], is access to other teachers' units either online or on the shelves of your school library which you can take from when designing lessons at school. There is a wealth of information available in those curriculum units.

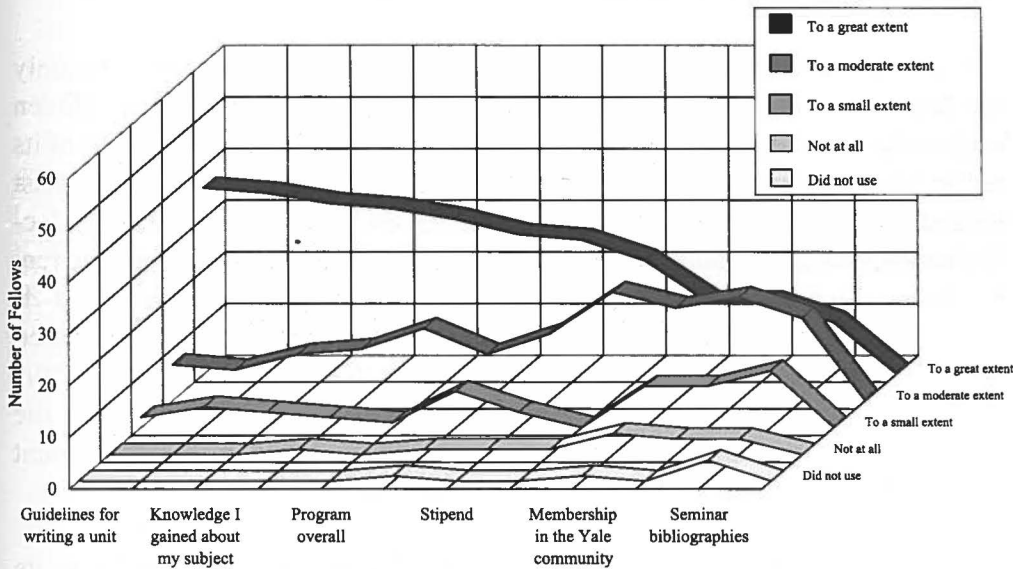
Two extremely positive experiences resulted this past academic year in my history classes as a result of my participation in the Institute. First, in studying conflict resolution through the United Nations, I was able to facilitate seven of my students' participation in the Yale Model United Nations. . . . We were one of 152 delegations from high schools in New England, across the United States, and abroad. Individually or in pairs [my students] participated in a number of committees that drafted resolutions to problems such as bio-terrorism, drinking-water quality, the African Union, and the World Bank. . . . Our delegation [was] invited to a Board of Education meeting and [students] spoke about their experiences at the conference. Another result of their positive experience has been the creation of a United Nations Club that will work in conjunction with a newly created elective class in international relations.

Participants' Conclusions Overall

We asked Fellows about the extent to which several features of the Institute had been useful to them. As shown in Chart 7 below (reading again left to right from the most useful to the least useful), very few Fellows said that any aspect of the Institute had not been useful. In fact, except for the seminar bibliogra-

phies and computer assistance, each aspect of the Institute was regarded as useful to a great or moderate extent by 70 percent of the Fellows or more. More than half (65 percent) responded that favorably to the seminar bibliographies, and to computer assistance (56 percent).

Chart 7
Program's Usefulness to the 2003 Fellows



Very few Fellows said that any aspect of the Institute had not been useful.

We asked seminar leaders to provide their overall conclusions about the strengths and weaknesses of the Institute. One of them wrote:

The program is admirable, truly well run; it commands the respect of the teachers whom it lures to participate. Although they feel they are being very closely monitored, they understand that the schedules they are required to adhere to make sense. They know that many others have gone through this system successfully before and so they are confident that the results will be worthwhile. I am very pleased to have worked this summer on this project and with everyone concerned, Fellows and administrators.

"The program is admirable, truly well run; it commands the respect of the teachers whom it lures to participate."

—Seminar Leader

We also asked Fellows to provide their overall conclusions about the strengths and weaknesses of the Institute. Some individuals answered very directly and specifically, while others responded more philosophically. One Fellow "believe(s) that my students have appreciated the attention that I have given to [the subjects of his curriculum units] and I know that I have been a more effective and a happier teacher in the process. Various other goals of the Institute, to improve teacher morale, enhance teacher leadership, and assist in teacher retention in New Haven, have also been met, according to my own assessment." Another "feel[s] that the YNHTI experiences have added to my knowledge, skills and talents in a number of subjects and in a number of ways. For example, I have been able to integrate subject content of various disci-

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plines, because of the background knowledge I have received in the science and social studies curriculums. In addition, writing curriculum units has helped me to improve my writing. Moreover, networking with teachers in my school and other teachers across the district has added to the strategies and resources I use with teachers and students in my school." This Fellow concluded, "My leadership style has been influenced by the collaborative approach used by Fellows, seminar leaders, Coordinators, Representatives, and the Steering Committee. The working relationship with others is based on tolerance, trust and understanding."

One Fellow thought that the Institute's weaknesses "are few. The only one that is worthy of comment," she said, is that "Probably most New Haven teachers know of the Institute, but many do not recognize the availability of its resources or the opportunities that it offers participants." She proceeded to list what she called the Institute's "numerous and impressive" strengths: "The lecture series, variety of topics and styles of presentation; the volume of research; the diversity of curriculum topics; the indexing; the Web page; the knowledgeable and responsive staff; the extra tours and workshops; and the detailed structure of the annual offerings." Similarly, a first-year teacher itemized "the advantages" of the Institute for someone new to teaching: "get to know the curriculum better; improve organization and study skills; time-management since one has deadlines to meet; working in groups."

Another Fellow wrote, "The strength of the Institute seems to lie in its organization and clear directions," while "frequent communication via Coordinators, seminar leaders, and e-mail informed or reminded participants of important dates and events. The lecture series was lively, interactive, and

"My leadership style has been influenced by the collaborative approach used by Fellows, seminar leaders, Coordinators, Representatives, and the Steering Committee. The working relationship with others is based on tolerance, trust and understanding."

—Institute Fellow



Michael Marsland

The seminar on "Everyday Life in Early America." (Left to right: Fellows Thomas P. O'Connor, Sheila Wade, Malini Prabakar, Barbara K. Smith, and Jameka K. Sayles.)

informative." A different Fellow, in speaking of the Institute's "many strengths," cited its being "extremely well run" and noted that "many teachers take great pride in having their units published. I know I do. After working with young children all day I find it refreshing and intellectually stimulating to be among peers taking an academic 'course' together. In each experience I have had over the years I have especially enjoyed the camaraderie that develops among the people in my seminar."

Others said:

As far as my students are concerned, they have had access to content areas that otherwise they would not have. We have been able to cover in depth other topics that are already part of the district's curricula. Thus, I have been able to broaden the curriculum I cover and integrate it with what we must cover. For the school, my participation in the seminars has allowed me to make suggestions to other teachers of curriculum units written which relate to topics they are covering in their classroom.

The Institute allows Fellows an invaluable opportunity to write a unit geared to the needs of their students. It also provides the opportunity to work with Yale professors who willingly share their expertise for the benefit of our students. The use of Yale facilities is also a major benefit in conducting our research and developing interest in related issues. I have been in the Institute for the past eight years and feel each Institute provided useful and interesting topics. I feel this year there was a wide selection of topics that will be very useful in many classrooms.

In sum, aside from a number of complaints about details of scheduling and procedures and despite several Fellows' mixed experiences, the Institute's offerings were well received. Fellows almost uniformly expressed appreciation, and often enthusiasm, for the program.

In their evaluations, almost all the Fellows said they intended to participate (72 percent) or might participate (22 percent) in the Institute in one or more future years. These proportions are very similar to those in prior years. Only two Fellows said they did not intend to participate in the future. Said one: "I am considering retiring in the near future." The other expected to be moving away from the New Haven region.

Electronic Resources and Assistance

From the Institute's inception, Fellows have been full members of the Yale community with access to resources throughout the University. For nearly a decade the Institute has been exploring how computing can enhance its partnership, because computing overcomes the barriers of time and distance that

"The Institute allows Fellows an invaluable opportunity to write a unit geared to the needs of their students. It also provides the opportunity to work with Yale professors who willingly share their expertise for the benefit of our students."

—Institute Fellow

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can impede collaboration, and because it is a non-hierarchical form of communication and therefore consistent with the collegiality that is a tenet of the Institute's approach.

In 1995 Fellows became eligible to purchase Yale computer accounts, and a number of Fellows have therefore had Internet access and e-mail provided in this way. Given the proliferation of other free or inexpensive sources of Internet and e-mail service, the Institute now emphasizes the assistance it can offer to Fellows in securing access with providers that offer accounts indefinitely (and often at no charge for e-mail) into the future, whether or not an individual is participating in the Institute. Regarding technical support, for nine years the Institute has offered direct computing assistance from its own office. In addition, Fellows may use the facilities at the Yale Computer Centers that serve all members of the University community.

Because of the benefits to the Fellows and to other teachers that result from having the curriculum units on-line, the Representatives had decided that, beginning in 1999, Fellows must submit their curriculum units and *Guide* entries in electronic as well as printed form. They are asked to follow the Institute's recommendations on word-processing software and hand in the disk version of their second draft directly to the Institute computer assistant (or to the seminar leader, if she or he chooses to perform this function), who checks them for formatting errors. They are returned with a checklist that indicates any problems. This procedure, which sets the stage for a discussion with the computer assistant, ensures that the final version on disk will be free of those problems. In 2002 and 2003 Fellows were also encouraged to submit their first drafts in electronic form, so as to give the computer assistant an early opportunity to review the format and offer guidance.

The electronic resources and services available to Fellows include many opportunities to learn about and use computing.

The electronic resources and services available to Fellows include many opportunities to learn about and use computing, regardless of previous experience and expertise. The Yale University Library sponsors a series of hands-on computer classes each semester on a variety of topics, including an overview of the Library's online services, an introduction to Netscape, Internet search engines, and subject-specific Internet workshops. Classes take place in the Electronic Classroom in Cross Campus Library, and are free of charge.

Beyond such workshops, and beyond the mandatory assistance provided through the checking of all of the disks on which curriculum units would be submitted, a number of the Fellows sought additional assistance. In 2003 Fellows received help on a variety of topics, which included getting started with computing, setting up an e-mail account, getting started on the Internet, using the Internet in research and teaching, and using Institute resources on-line. In tandem with staff from the University Library, the Institute computer assistant conducted a workshop for Fellows in the Electronic Classroom on the Yale campus on April 9. This session featured an overview of Internet search engines; exploration of the curricular resources available online through the

Institute's Web site; and guidance on how to use online research tools of the Yale libraries, including databases and online journals.

The Fellows also sought support from the computer assistant individually with word-processing and file handling for the preparation of curriculum units. When meeting with her, many of them asked for help with basic word-processing functions. Their greatest problem was converting their documents to files that could be read by Institute computers. Fellows also had questions about format and documentation. An increasing number of Fellows asked about how to incorporate graphics, including tables and images, into what would become the printed version of their units.

Thirty-seven percent of the Fellows made use of assistance in person, 20 percent by phone, and 33 percent by e-mail. These percentages were slightly reduced from prior years, reflecting an encouraging tendency for Fellows to have sufficiently mastered the kinds of skills for which in earlier years more participants had sought assistance. Still, for 53 percent of Fellows the availability of computer services was an incentive to their participation. Most Fellows who did not use the computer assistance said they did not need it because they had previously acquired sufficient computer skills, or because they had other resources at home or school. A few said they did not do so because of time constraints during the school year. Yet those individuals who did take advantage of the assistance expressed appreciation for the skills and efficiency of the computer assistant and others whom they consulted. One Fellow said:

The information and assistance provided allowed me to solve the computer problems I was having with my Internet access. The staff was courteous and provided constructive tips and information. I feel that it is very important to have computer assistance available for teachers—especially for those who have limited knowledge of computers and the Internet. In addition, the notes provided on my disk were helpful. These suggestions allowed me to fix the problems before I turned in my final draft.

This year two seminar leaders themselves worked closely with the Fellows in their groups on computing, in one case arranging a visit for the members of that seminar to a campus electronic research facility. As one Fellow in that seminar described, "[The seminar leader] set up a field trip for our class where we could get the hands-on experience of how to use the system and how to find the information relevant to our curriculum units. This really helped me a great deal with my research. I was able to read text from litigation that just took place and I could trace the history of my topic to newspaper articles from the beginning of our judicial system." This Fellow concluded, "The computer assistance offered to us by the Institute was very useful in the writing of my unit. When I heard we were extended this privilege, I was floored."

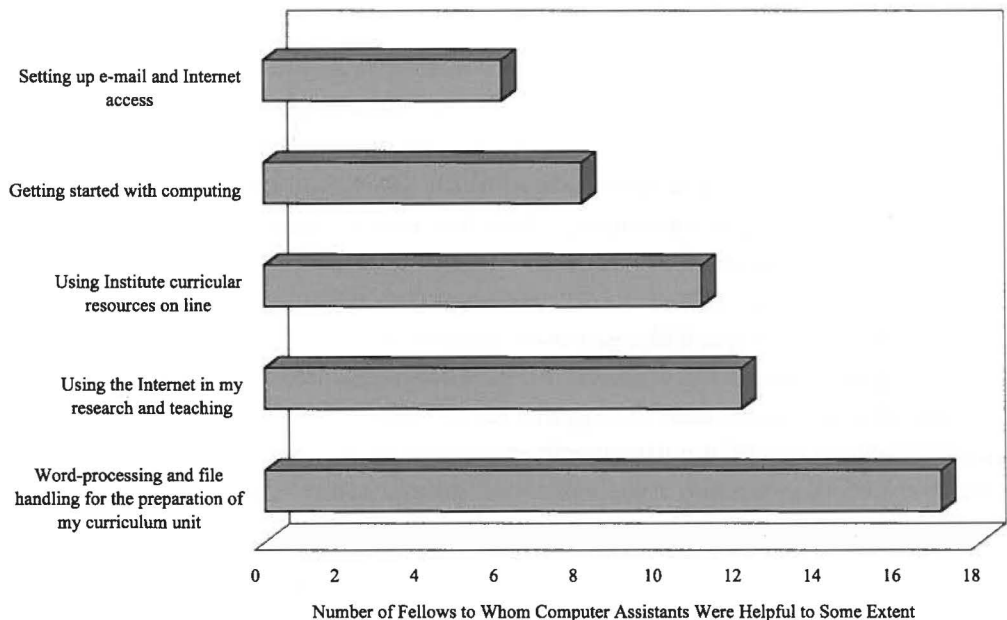
"The information and assistance provided allowed me to solve the computer problems I was having with my Internet access. The staff was courteous and provided constructive tips and information."

—Institute Fellow

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Of the Fellows using the additional computer assistance that the Institute provided, eight found the assistants helpful in getting started with computing; six found them helpful in setting up e-mail and Internet access; 11 found them helpful in using the Institute's curricular resources on-line; 12 found them helpful in using the Internet in research and teaching; and 17 found them helpful in word processing and file handling for the preparation of a curriculum unit. (See Chart 8.)

Chart 8
Computer Assistants' Helpfulness to the 2003 Fellows



Institute Centers for Curriculum and Professional Development

In 1996 the Institute undertook with the New Haven Public Schools a new program designed to broaden and deepen its efforts to strengthen teaching and learning in the schools. It offered several elementary, middle, and high schools the opportunity to establish an Institute Center for Curriculum and Professional Development within their buildings. Five such Centers were established in 1996. Over subsequent years the Institute has articulated and refined the concept of the Centers, prepared policies and procedures for them, and designed, constructed, and delivered special furnishings to them.

The Institute aims to situate the Centers around the city, targeting especially the larger schools, so that a majority of New Haven teachers will have a Center at their school or at a school near them. During 2003, eleven Centers were in operation. They are located at two elementary schools (L. W. Beecher and Davis Street Magnet), one K-8 school (East Rock Global Studies Magnet), three middle schools (Fair Haven, Jackie Robinson, and Roberto Clemente), and five high schools (Cooperative Arts and Humanities, Hill Regional Career Magnet, Hillhouse, Wilbur Cross, and Sound Magnet). In fall 2003, Roberto Clemente Middle School was converted into a K-8 school.

The Institute aims to situate the Centers around the city, targeting especially the larger schools, so that a majority of New Haven teachers will have a Center at their school or at a school near them.

These Centers are not permanent installations but must be regularly renewed. A Center may remain in a school so long as the school has a need and a desire for it, but it can then be moved to another school. Moving Centers from school to school increases the citywide exposure to the Institute. The Steering Committee, which makes these decisions, has developed criteria for targeting sites. A suitable site must be of sufficient size, with a critical mass of participants and a sufficient leadership. It must be able to rely upon a favorably disposed school administration and an appropriate school plan, and be consistent with the aim of allowing most New Haven teachers to have a Center at their school or nearby.

The Institute and the New Haven Public Schools view the establishment of Institute Centers as a vital component of curriculum reform efforts system-wide. The Centers carry out school-based plans and address the District's "Kids First" goals, which call for more site-based management, improvement of curriculum and instruction, greater staff development, increased parental involvement, and improved physical condition of schools. The Centers directly address the first three of these goals and provide new opportunities with respect to the last two. They attempt to create in schools a place that will be conducive to the kinds of conversations teachers have with each other and with their Yale colleagues in Institute seminars. They are intended to increase the visibility and use of Institute resources and include teachers who have not before been Institute Fellows. They disseminate Institute-developed curriculum units more widely, and help the teachers to learn how to use curriculum units that are on-line, explore computing as a means of collaboration, and apply the Institute's principles in new ways within the school environment itself.



Josiah H. Brown

The Institute and the New Haven Public Schools view the establishment of Institute Centers as a vital component of curriculum reform efforts system-wide.

Institute Center for Curriculum and Professional Development in Davis Street School. (Left to right: Center leaders David DeNaples, Jean E. Sutherland, and Waltrina D. Kirkland-Mullins.)

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Combining utility and symbolism, these pieces have a solidity and elegance in harmony with the tradition of design at Yale University, and an evident durability suggestive of the Institute itself.

The Centers therefore operate from attractive and properly equipped rooms in the schools themselves, containing special furnishings designed by Kent Bloomer, Professor of Architectural Design at Yale, who has led two Institute seminars. Bloomer has designed for each Center two pieces of furniture that will remind the users that a Center is a way of bringing teachers together, and that it is a function of the mutual presence of Yale in the schools and the schools in Yale. Combining utility and symbolism, these pieces have a solidity and elegance in harmony with the tradition of design at Yale University, and an evident durability suggestive of the Institute itself. One piece is a round table, with a hole in the middle, which provides the "center" about which eight people can sit. The center of the table is filled with a circular design, the Yale-New Haven Teachers Institute logo multiplied as a continuous fret, which is done in tile and set in cast metal for permanence. The second piece is a very high bookcase, designed to hold volumes of the curriculum units and other Institute materials, with hand-plated inlay work across the top that carries the same continuous fret depicting the Institute logo. A banner continues the logo of the fret into the room.

Most Centers contain at least one computer with a high-speed modem so that the teachers have easy access to the Institute's Web site. As noted in the Annual Report for 2001, the Institute has upgraded the computer operating systems at the older Centers to Windows NT. The computers delivered to the newer Centers have this system pre-installed. The Institute also inventoried Institute resources in several of the Centers—curriculum units, center manuals, books, videos, etc.—and replenished them where possible. In 2001 all of the high school Centers received new and more powerful computers.

Schools interested in becoming a Center site must apply to the Institute's Steering Committee. An application, which requires the involvement of the school's principal and management team, must contain an Academic Plan for the calendar year, describing how the teachers in the Center will take full advantage of Institute resources while working on school plans that address the goals of the District. If a school is selected as a Center site, its Academic Plan must be updated and renewed each year.

Schools selected as Center sites become eligible to receive special resources and incentives from the Institute. These incentives, which are outlined in the Center manual, assist with the Center's development as well as the implementation of its Academic Plan.

One member of the Institute's Steering Committee (at the same school level) is assigned to work with each Center's Coordinating Team. During summer 2003 three members of the Steering Committee reviewed the mid-year reports from the Centers and then organized a meeting of Center leaders for the fall. This followed a June gathering of Center leaders at Davis Street Elementary School.

The fall meeting, on September 16 at Roberto Clemente School, was an opportunity for the Steering Committee to relate findings from the mid-year reports and to orient teachers new to the Center concept. The conversation elicited ideas and experiences at various schools, and encouraged ways for Centers to work together.

Among the topics were the Reference Lists that were earlier products of Center activity. These documents—one aimed at primary and the other at secondary grades—highlight connections between hundreds of Institute—developed curriculum units and the academic standards and curricular priorities of the New Haven Public Schools. Earlier in 2003, the Institute had placed online versions of these Reference Lists on its Web site, and the Lists were highlighted among the resources available to Fellows at the March session on curriculum unit development.

New Center teams from schools such as Wilbur Cross and Hill Regional Career High particularly benefited from the September 16 discussion, which featured a background document that the Steering Committee had compiled as a result of their summer review of the Centers. Another area of emphasis was the Centers' potential value in supporting new teachers, who in some cases—from Fair Haven Middle to Career High School—have already demonstrated that the Institute resources available in Centers can be a point of entry for these individuals' broader involvement in the program.

Another area of emphasis was the Centers' potential value in supporting new teachers.

The Institute seeks not only to institutionalize the Centers' work in New Haven but also to integrate the Center concept in its work with the new Teachers Institutes in other cities. The New Haven teachers on the Implementation Team for the National Demonstration Project were either Steering Committee members or Coordinators for the Center in their own school. Encouraged by the example of their New Haven colleagues, teachers in the Houston Teachers Institute have been particularly interested in implementing the concept of Centers in high schools in order to extend the influence of the Institute Fellows and their curriculum units across that school district, the fourth largest in the United States.

Preparation for the Program in 2004

From June through August the Institute identified and approached the 73 teachers who would serve during the 2003-2004 school year as the 21 Representatives and 52 Contacts for their schools. During 2002-2003, 66 teachers had served in these ways, 21 as Representatives and 45 as Contacts. Representatives were selected according to recommendations of the teachers who served as seminar Coordinators and conversations they had with persons who had served as Representatives in the past, with other Institute Fellows, and with some school principals. Because the Coordinators had become acquainted with all current Fellows, this mode of selection assures that all Fellows receive consideration for leadership positions. Notable among the



Michael Mansland

School Representatives meeting. (Left to right: Representatives David DeNaples, Sharron Solomon-McCarthy, Joanna M. Ali, and Judith Goodrich.)

Representatives for 2003-2004 were five teachers in their third year in New Haven, one in his second year, and three in their first year, reflecting the Institute's efforts to cultivate new leaders while maintaining the participation of experienced Fellows.

Teacher leadership in the Institute is proportionate to the number of schools at each level. During 2002-2003, 24 (36 percent) of the Representatives and Contacts were from elementary schools, 11 (17 percent) represented K-8 schools, 10 (15 percent) represented middle schools, four (6 percent) represented transitional schools, and 17 (26 percent) represented high schools. Similarly, in 2003-2004, 25 (34 percent) of these teacher leaders represent elementary schools, 13 (18 percent) represent K-8 schools, 12 (16 percent) represent middle schools, four (6 percent) represent-transitional schools, and 19 (26 percent) represent high schools.

Every school had at least one Contact or Representative to serve as a conduit for information to and from the Institute throughout the school year. Of the Representatives and Contacts, about 23 percent were Black Non-Hispanic, 67 percent were White Non-Hispanic, and 11 percent were Hispanic—percentages that approximate the demographic composition of teachers in the district at large. Representatives attend meetings every other week from September to March. They receive an honorarium for this work and agree in advance to participate in the program they are planning, whereas Contacts perform many of the same functions but are not required to participate in bi-weekly meetings or to commit themselves to Institute participation. Through the Representatives and Contacts, the Institute ensures that all teachers throughout the school district may have an effective voice in shaping a program of curricular and staff development in which they will then have the opportunity to take part.



Michael Marsland

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School Representatives meeting. (Clockwise from bottom left: Representatives David N. Reynolds, Sandra K. Friday, Jason Todd, Mary Donahue, Justin Boucher; Raymond W. Brooks, Director James R. Vivian, Representatives Joanne R. Pompano, Angelo J. Pompano, David DeNaples, Sharron Solomon-McCarthy, Joanna Ali, Judith E. Goodrich, Elizabeth Scheffler, Jean E. Sutherland, Kristin Carolla, Pedro Mendia-Landa, Abie L. Benitez, and Associate Director Josiah H. Brown.)

The first meeting of the Representatives for the new school year was held September 9, 2003. On September 23, the Institute's reception for Representatives and Contacts attracted a cross-section of teachers, including several who were new to their responsibilities after having been recruited by experienced Fellows. The Representatives met twice monthly with the Associate Director and, on most occasions, the Director. Between meetings, the Representatives communicate by phone and through school visits with the Contacts for whom they serve as liaison to the Representatives' committee. In these ways, their meetings compile information from, and distribute information to, teachers throughout the New Haven elementary, middle, and high schools.

By the end of December the Representatives had approved the following five seminars for 2004: "The Supreme Court in American Political History" (Robert A. Burt, Alexander M. Bickel Professor of Law); "Children's Literature, from Infancy to Adolescence" (Paul H. Fry, William Lampson Professor of English); "Representations of American Culture, 1760-1960: Art and Literature" (Alexander Nemerov, Professor of History of Art and American Studies); "Energy, Engines, and the Environment" (Alessandro Gomez, Professor of Mechanical Engineering"); and "Keeping the Meaning in Mathematics: The Craft of Word Problems" (Roger E. Howe, William R. Kenan Jr. Professor of Mathematics).

Local Advisory Groups

Steering Committee

The Steering Committee has responsibility for long-range planning and the implementation of pilot and other new activities of the Institute.

The Steering Committee, composed of school teachers who have played leading roles in the Institute at various times since its inception, has responsibility for long-range planning and the implementation of pilot and other new activities of the Institute. Members of the Steering Committee are selected by the Institute Director. A Steering Committee member must be—and must intend to continue as—a teacher in one of New Haven's public schools. By agreeing to serve as a Steering Committee member, a teacher accepts the following responsibilities. Each member:

- Exerts leadership and participates actively in one or more of the following areas: establishment and development of Institute Centers for Professional and Curriculum Development in specific schools; preparation of system-wide curricula drawing on Institute curriculum units; development and use of electronic resources and communications; planning and conduct of after-school, Saturday, and summer Academies for teaching Institute units to New Haven students; conduct of interdisciplinary or inter-grade teamwork in specific schools; and organization and provision of technical assistance to Teacher Institute demonstration sites in other cities.
- Attends and comes prepared to meetings twice monthly and takes professional days when needed to carry out these responsibilities.
- Participates as an Institute Fellow in the spring and summer following selection as a Steering Committee member.

The members of the Steering Committee during 2003 were David DeNaples of Wilbur Cross High School, Carolyn N. Kinder of Sheridan Middle School, Pedro Mendia-Landa of Columbus Family Academy, and Jean E. Sutherland of Beecher Elementary School. The Steering Committee operates as teacher leaders for each sphere of Teachers Institute work. The Committee focused during the year on the Institute Centers for Curriculum and Professional Development, the implementation of the seminars for 2003 as well as planning for 2004, and the cultivation of new leadership within the Institute.

The group gave particular attention to the continuing effort to recruit and support new teachers participating as Fellows. Working with the larger team of Representatives, the Steering Committee (three of whom are currently also Representatives and all of whom have been in the past) considered the participation of additional teachers at various other stages of their professional development, as well. The Steering Committee helped to encourage the emergence of new Center teams at a number of schools, which required Committee



Michael Marsland

Steering Committee meeting. (Left to right: Steering Committee members Pedro Mendia-Landa and Carolyn N. Kinder, Associate Director Josiah H. Brown, Steering Committee member Jean E. Sutherland, and Director James R. Vivian.)

members to advise and communicate with their teachers. The Committee played a similar liaison function with respect to the Representatives who were serving in that capacity for the first time. Ten of the 21 Representatives for 2003-04 were new to that role as the fall began; and five of those ten had yet to be Fellows. So the guidance and lessons learned from the Steering Committee were especially valuable in preparing the beginning Representatives for the responsibilities that they encountered both at their own schools and at others.

With a mandate from the Steering Committee, Associate Director Josiah H. Brown continued to visit elementary, middle and high schools across the city and—together with an Institute Fellow—spoke on the Institute's behalf at the district's Open House for prospective teachers on January 9 and at its Teacher Visitation Day on May 1. Those events were opportunities to demonstrate the Institute's potential for helping to attract, as well as to develop and retain, qualified teachers in the district. On other occasions, Brown also attended an orientation session for the district's new teachers at which he introduced them to the Institute, and spoke with faculty and teachers-in-training at universities ranging from Southern Connecticut State and the University of Connecticut to Quinnipiac and Fairfield. The aim was to ensure that both new and prospective New Haven teachers were aware of the opportunities for curricular and professional development that the Institute affords—opportunities not available to teachers in other Connecticut districts. On some of these occasions, Steering Committee members joined Brown and made the presentation jointly. A member of the Steering Committee also arranged a meeting to update and exchange ideas with the New Haven Public Schools' science curriculum

The aim was to ensure that both new and prospective New Haven teachers were aware of the opportunities for curricular and professional development that the Institute affords.

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supervisors, who then personally invited the Institute to be on the agenda of their next city-wide session.

University Advisory Council

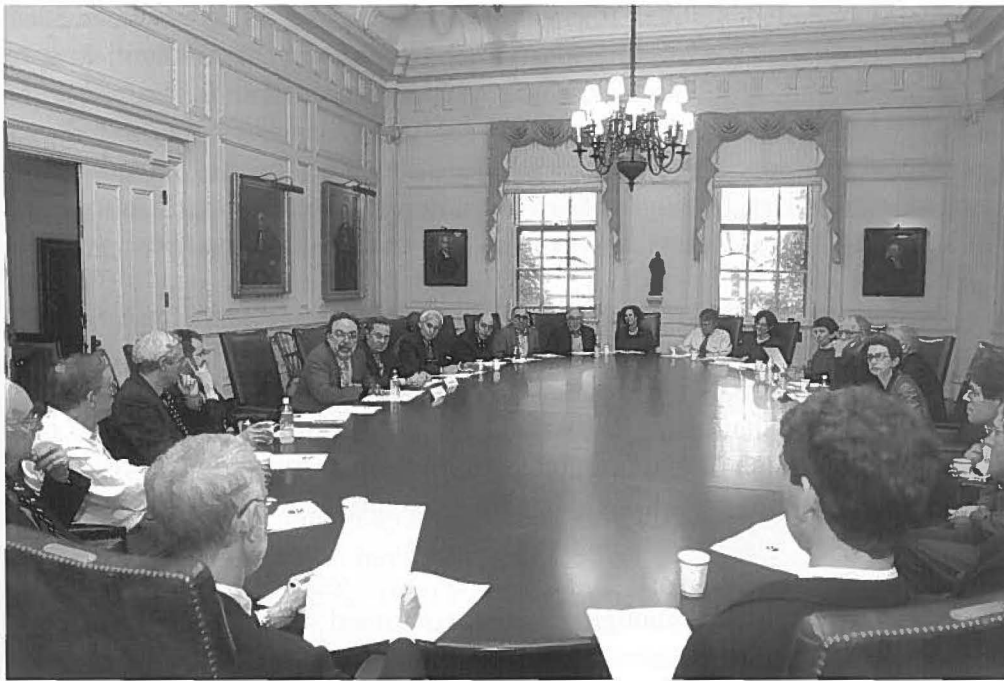
Yale faculty members advise and assist the Institute through the University Advisory Council and its Executive Committee, both appointed by the Yale President. (For members of these bodies, see Appendix.) The Advisory Council guides the general direction of the program and acts as a course-of-study committee so that the Institute can certify Fellows' work to institutions where they may be pursuing advanced degrees. The Council also advises the Yale President on the Institute and, more generally, on matters concerning the University's involvement with the schools locally and with public elementary and secondary education nationally.

The University Advisory Council meets once each year; the Executive Committee ordinarily meets twice or more each semester. The co-chairs of the Council meet and communicate frequently with the Director between meetings. Members of the Executive Committee and the Steering Committee meet jointly from time to time to share information about their respective activities and to explore appropriate ways of working together.

During 2003 the Executive Committee met in March, April, and October. At the March meeting the Executive Committee formally approved the Institute's seminars for 2003. It also discussed the status of our national plans and Executive Committee membership. The April meeting planned the agenda for the Council meeting that would be held in June. The October meeting dealt with the New Haven program conducted in 2003, the University Advisory Council meeting held in June, membership of the Council and its Executive Committee, the Yale National Initiative to strengthen teaching in public schools and a new national Web site, fundraising, and progress that has been made in internal and external evaluations. Co-chair Mary Miller also described a very positive informational meeting that she and Jim Vivian had during the summer with the new Yale Provost, Susan Hockfield.

On June 18, the full University Advisory Council held its tenth annual meeting with President Levin. Roberto González Echevarría opened the meeting, introducing new members and setting forth its purpose: to hear brief reports from the Director and from the documentor for the National Demonstration Project and to ask the Council's advice on a timely question about our national work, which would be posed by the other co-chair, Mary E. Miller.

James R. Vivian then reported on the past year's local and national work. He described the celebration of the Institute's 25th anniversary on November 13, 2002 and the Conference of Teachers Institutes that was held on November 14, which included teachers, faculty, and administrators from Pittsburgh, Houston, and New Haven.



Michael Mansland

The Council advises the Yale President on the Institute and, more generally, on matters concerning the University's involvement with the schools locally and with public elementary and secondary education nationally.

University Advisory Council meeting, June 2003. (Clockwise from left: Bruce M. Russett, Kent C. Bloomer, Leon B. Plantinga, Murray J. Biggs, John Rogers, Roberto González Echevarría, Richard C. Levin, Robert J. Wyman, Peter Salovey, Werner P. Wolf, Sabatino Sofia, Jules D. Prown, Amy Meyers, Daniel E. Prober, C. Megan Urry, Cynthia E. Russett, Thomas R. Whitaker, James R. Vivian, Mary E. Miller, Dudley Andrew, John P. Wargo, and Josiah H. Brown.)

In summarizing the local work of the Institute, Vivian said that special emphasis was being placed on recruiting and assisting persons who are in their first year of teaching in New Haven. We hope in this way to reinforce the role we have played in retaining teachers in New Haven. This role is increasingly important because of the growing proportion of first- and second-year teachers in the district, and the disturbing number of them who do not remain here.

Turning to the National Initiative, Vivian reviewed the decisions, following the advice of the Council in May 2000, that led to an ambitious proposal for establishing as many as 45 new Teachers Institutes across the nation by 2013. Because in 2001 the Council had recommended that the work with other cities be closely identified with the University, we have termed this work the Yale National Initiative. In 2002 the Council also advised us on what should be its non-negotiable principles.

Since then Vivian reported, we have supported research in Pittsburgh and Houston on the results of their Institutes, and on ways in which they may achieve a larger impact in their school districts. We have also revised the principles that have guided the establishment of the new Institutes—terming them "understandings" to reflect that they are mutually understood and agreed upon, not merely required by the Yale-New Haven Teachers Institute. We have worked with Pittsburgh and Houston on the role they wish to play in establishing more Institutes—a role in which we plan also to involve colleagues from Albuquerque and Santa Ana. We have also entered and analyzed data from the survey on the use of curriculum units in Pittsburgh, Houston,

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Albuquerque, and Santa Ana that had been administered in December 2001 and January 2002. Assisted by the former Co-chair of the Council, Rogers Smith, and a team of research assistants he has assembled at the University of Pennsylvania, we are conducting further analysis of data obtained in Fellows questionnaires from all five Institutes. The Council has been provided a summary of preliminary findings, which we will be discussing this summer and fall among ourselves and with representatives of the other Institutes.

Vivian then commented on the value of technology in our work, especially our Web site, which during 2002 received five million hits from more than 700,000 persons. This Web site is one of the most popular of the some 1,400 sites on the main University server. During 2002 it received 3.13 percent of all hits, which placed it in the top four-to-eight most-visited sites every month last year. Hits on the Institute site were consistently higher than hits on the YaleInfo and Yale College Admissions sites.

Vivian stated that, although we have continued to work with major and lesser funders, we have not yet secured support for the next phase of the National Initiative, nor have we yet placed our annual work in the sciences in New Haven on a secure financial basis. We will continue to appeal to foundations with both national and regional interests, but intensifying our efforts with regional funders raises certain questions on which the Council's advice is being sought today. While each piece of our national work must be in accord with the interests of its particular funder, our challenge will be to give coherence and unity of purpose to the whole national picture.

Vivian concluded by reporting that the local and the national work continue to be mutually reinforcing. The national work has provided opportunities for New Haven teachers and Yale faculty members to learn about the educational landscape in other communities. It has made us better at explaining the Institute approach, and more certain of its value. And the National Initiative continues to draw attention and support to the Yale-New Haven program that it would not otherwise receive. This, Vivian said, has only strengthened our resolve to make our work in New Haven the best possible example of the Institute approach.

Thomas R. Whitaker then reported on progress in research and planning for the Yale National Initiative. With the assistance of Rogers Smith and his associates at the University of Pennsylvania, we have been collating and analyzing the surveys of Institute Fellows at all four demonstration sites concerning their motives for participation and their responses to seminars. We have also been collating and analyzing the surveys of Institute Fellows and a sampling of non-Fellows at all four sites concerning their evaluation of curriculum units, student responses to curriculum units, and the use of units by non-authors and non-Fellows.

The results of those surveys, Whitaker said, are indicating that the Teachers Institute model has been very successful in helping the teachers' pro-

The local and the national work continue to be mutually reinforcing.

fessional growth, helping their knowledge and confidence, and raising their expectations for students. The majority of Fellows rated the curriculum units they prepared as more enjoyable to teach than their other curricula; and a majority also rated them as superior to other curricula. A majority of Fellows also rated student attention, student interest, and student motivation as higher during these units, and about half of them also rated student content mastery as higher during these units.

Whitaker then described how the Pittsburgh and Houston Institutes have proceeded with their own research and planning. Pittsburgh, with the assistance of Cornerstone Evaluation Associates, has conducted surveys to reflect upon the process followed in the initiation of the Institute and to solicit suggestions for its improvement. It has also held focus groups on the implementation of the Institute model and the best ways to disseminate curriculum units. It has continued efforts to have a systemic effect in Pittsburgh by developing (through partial funding by the U. S. Department of Education) seminars in subjects deemed most desirable by the district.

The Houston Teachers Institute has worked with two professors of sociology at the University of Houston, who gathered and analyzed data and held focus group interviews in order to ascertain the effectiveness of the Institute. The Director also interviewed selected Fellows, observed their teaching of curriculum units, and observed the activities of the Teachers Institute. His research will provide the groundwork for a book on "A Year with the Teachers Institute." The Houston Institute has also worked to increase its systemic effect in the district by offering seminars to be funded by Project TEACH, a partnership between the Institute and the Houston Independent School District supported by the U.S. Department of Education to advance the teaching of United States history in public schools.

Whitaker then described in greater detail the Conference of Teachers Institutes on November 14, 2002, which discussed how the Yale National Initiative might best proceed. Participants asked: What are the indispensable principles or goals of a Teachers Institute? How may the roles of seminar leader and coordinator be best fulfilled? And how do the Institutes affect the Fellows, their students, and the seminar leaders? The responses indicated an overwhelming approval of the principles and the process as they have been implemented during the National Demonstration. Participants also praised the information sessions we conducted and the many site visits we made, and resoundingly endorsed the July Intensives in New Haven, which included National Seminars offered by Yale faculty, and the Annual Conferences, in which teams from the various sites shared their best practices. The participants also suggested that they wished to share more fully in these activities in future.

In this effort, as Whitaker reported, we may also look forward to an expansion of the role played by our Web site, which is linked with the Web sites of the other Teachers Institutes. Teachers and administrators across the

Results of surveys are indicating that the Teachers Institute model has been very successful in helping the teachers' professional growth, helping their knowledge and confidence, and raising their expectations for students.

The responses indicated an overwhelming approval of the principles and the process as they have been implemented during the National Demonstration.

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country—and indeed throughout the world—have praised the usefulness of the curriculum units they have found there.

Rod Paige issued a report on teacher quality, which stated that the foremost problem in the nation's schools is the inadequate preparation of many teachers in the subjects they teach. The Yale National Initiative addresses that concern very successfully.

Whitaker noted that Rod Paige, the U. S. Secretary of Education and former superintendent of the Houston Independent School District, had issued a report on teacher quality, which stated that the foremost problem in the nation's schools is the inadequate preparation of many teachers, especially in the "hard-to-staff" urban districts, in the subjects they teach. Our continuing research shows that the Yale National Initiative addresses that concern very successfully. It directs its seminars to content areas in which teachers lack preparation, and it helps teachers to become more self-confident and enthusiastic about what they are teaching. Its curriculum units encourage students to become active learners and acquire skills vital to student achievement. And it serves a cross-section of teachers whose very adaptable units can meet the needs of the average and the least advanced of students.

In the coming months, Whitaker said in conclusion, we will be preparing a Brochure for the Yale National Initiative, and a Request for Proposals. We intend to hold meetings with advisory groups, with teams from New Haven, Pittsburgh, and Houston, and with some representatives from Albuquerque and Santa Ana, as we revise and refine the processes by which we will introduce new sites to the Teachers Institute approach, and work with new Institutes.

Mary E. Miller then opened the general discussion by saying that, while continuing to pursue major sources of national support for the Yale National Initiative, we will intensify our search for regional funding to provide support for these national plans. In doing so, we need to consider the following possibilities and questions.

What appear to be the advantages and disadvantages of:

- Working with funders who wish to give directly to some local institution of higher education, or to a local partnership, to help establish a Teachers Institute that would contract with the Yale National Initiative to receive guidance, assistance, and other services?
- Working through other organizations that might help with the raising and administration of such funding?
- Expanding our offering of National Seminars (like those offered during the July Intensive Sessions of the National Demonstration Project), which could be opened to teachers from new Institutes established through such local funding and to others from sites that express interest in establishing new Institutes?
- Expanding our dissemination of information, and enlarging our use of technology through a Web site, videoconferencing, and streaming videos?

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The discussion that followed touched on a variety of points. President Levin wished at the outset to make clear why we were talking about these issues. There are, he said, only a couple of foundations that are ready to fund a national project. But we should not worry about local foundations buying into the Yale model. This is no problem, he said: they will do that.

One member said that we should keep in mind that the selection of a partnering institution had been, in the end, less important than that institution's visit to New Haven to learn first-hand how an Institute works. Another asked for clarification of the financial targets in this drive for funds. Another asked how the demonstration sites are continuing their own funding. Local foundations, said Vivian, and the U.S. Department of Education, have supplemented funds from the districts and the institutions of higher education.

Another member suggested that it would be useful to have a list of the foundations that had been approached but had declined. In response, Mary Miller said that it would be yet more useful for members to send to James Vivian their suggestions of foundations that might well be approached. Other members proposed the pursuit of federal education funding, subject-based funding, and the possibility of special funding for national seminars at Yale.

Mary Miller asked the group how we might expand our electronic communications. Suggestions here included: the televising of a Yale-New Haven fair, possible links to the online Learning Village being piloted, the use of television for distance learning, and fuller linking of people in a given region.

President Levin asked whether the Web site currently allows comments. He thought it might be desirable (and not too expensive) to arrange a system

The selection of a partnering institution had been, in the end, less important than that institution's visit to New Haven to learn first-hand how an Institute works.



Michael Marsland

University Advisory Council meeting, June 2003. (Left to right: John Rogers, Roberto González Echevarría, Richard C. Levin, Robert J. Wyman, Peter Salovey, Werner P. Wolf, Sabatino Sofia, and Jules D. Prown.)

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for posting comments by those who use the Web site. The President said that he was intrigued by the way the discussion was moving. "While we continue to move ahead with the national strategy," he said, "there are other strategies we might try: improving the Web site, developing contacts with yet other sites, and getting them interested in gathering local funds." In effect, he said, this calls for a continuing emphasis on "marketing."

One member asked whether the Web site was currently setting forth just the units. Do we describe the process by which the Institute works? James Vivian answered that the Web site contains all of the Institute documents, including the file of the periodical *On Common Ground*, but that indeed we should do more in the way of describing the actual process.

Mary Miller then closed the meeting, again urging all members to bring to James Vivian's attention any ideas they might have about strategies in the search for further funding or foundations or governmental organizations that might be interested.

In October, on the recommendation of the Executive Committee, President Levin appointed five Yale faculty members for terms of three years to the University Advisory Council: Karen Wynn, Professor of Psychology; James A. Bundy, Dean of and Professor in the School of Drama; Alexander Nemerov, Professor of History of Art and of American Studies; Jeffrey D. Kenney, Professor of Astronomy; and Alanna Schepartz, Professor of Chemistry and of Molecular, Cellular and Developmental Biology.

Also on the recommendation of the Executive Committee he appointed eighteen of the current Council members to new terms of three, four, or five years: Murray J. Biggs, Associate Professor (Adjunct) of English and of



Michael Mansland

University Advisory Council meeting, June 2003. (Left to right: Mary E. Miller, Margot Fassler, and Dudley Andrew.)

Theater Studies (3); Kent C. Bloomer, Professor (Adjunct) of Architecture (4); Jon H. Butler, William Robertson Coe Professor of American Studies and of History and Religious Studies (4); Edward S. Cooke, Jr., Charles F. Montgomery Professor of American Decorative Arts and Chairman of the History of Art Department, (3); Margot Fassler, Robert S. Tangeman Professor of Music History (5); Gary L. Haller, Becton Professor of Engineering and of Applied Science (5); Traugott Lawler, Professor of English (4); J. Michael McBride, Richard M. Colgate Professor of Chemistry (4); Michael H. Merson, Anna M. R. Lauder Professor and Dean of the School of Public Health (3); Leon B. Plantinga, Henry L. and Lucy G. Moses Professor of Music (3); Jules D. Prown, Paul Mellon Professor Emeritus of History of Art (4); Margretta R. Seashore, Professor and Director of Medical Studies and Genetics, Professor of Pediatrics and Genetics (4); Deborah G. Thomas, Associate Secretary of the University and Lecturer of African American and American Studies (3); Thomas R. Whitaker, Fredrick W. Hilles Professor Emeritus of English and of Theater Studies (3); Werner P. Wolf, Raymond J. Wean Professor Emeritus of Engineering and Applied Science and of Physics (4); Robert J. Wyman, Professor of Molecular, Cellular and Developmental Biology (5); Michael E. Zeller, Henry Ford II Professor of Physics (5); and Kurt W. Zilm, Professor of Chemistry (5). Each of these individuals accepted appointment or reappointment to the Council.

Local Program Documentation and Evaluation

Annual evaluations of the Teachers Institute indicate that it assists teachers and schools in specific ways, and that the results are cumulative. (See in particular *A Progress Report on Surveys Administered to New Haven Teachers, 1982-1990* [New Haven: Yale-New Haven Teachers Institute, 1992].) In the fall of 2003, the Institute updated its continuing study of New Haven teachers who have been Fellows. This study notes the proportion of eligible teachers from each New Haven school and department who have participated, the number of times Fellows have completed the program, and whether Fellows have remained teaching in New Haven. It revealed that, of the 557 New Haven teachers who have completed the program successfully at least once between 1978 and 2003, forty-five (45) percent are currently teaching in New Haven. (Please see the Appendix for a list of all Fellows from 1978 through 2003). An additional 30 (5 percent) have assumed full-time administrative posts in the school system. Thus half of all Fellows since 1978 are currently working in the New Haven Public Schools. These statistics are encouraging given the Institute's determination to involve individuals who will continue to serve students in our urban district.

Half of all Fellows since 1978 are currently working in the New Haven Public Schools.

If we focus on more recent cohorts of Fellows—the 250 individuals who have been Fellows at least once since 1995—the Institute's role within the New Haven Public Schools appears even more significant. Sixty (60) percent of those who have been Fellows since 1995 are still teaching in the district, while nine others are in full-time administrative positions in New Haven.

Table 2
Institute Fellows as a Percentage of Eligible
New Haven *Elementary* School Teachers

Kindergarten	3%
Grade 1	10%
Grade 2	5%
Grade 3	5%
Grade 4	13%
Grade 5	9%
<i>Total K - 5*</i>	14%

*Includes all other subjects, for example non-graded arts, special education teachers, librarians and curriculum coordinators. K-5 teachers in K-8 schools are included in the appropriate categories here, and the total also includes K-8 librarians, special education teachers, curriculum coordinators and those K-8 art teachers who teach grades K-5.

As Table 2 (above) shows, a substantial number of current elementary grades teachers in New Haven (14 percent) have completed successfully at least one year of the Institute. (Elementary school teachers were first admitted in 1990). As Table 3 (facing page) shows, 32 percent of New Haven high school teachers of subjects in the humanities and sciences, 28 percent of transitional school teachers, and 27 percent of middle school teachers have also done so. A number of teachers have participated for two to twenty-two years. Of those Fellows still teaching in New Haven, 46 percent have participated in the Institute once, 27 percent either two or three times, 21 percent four to seven times, and 6 percent eight times or more. In contrast, of those Institute Fellows who have left the New Haven school system, 48 percent completed the program only once, and 37 percent took part two or three times. Only 41 Fellows who have left (16 percent) completed the Institute four or more times, and of those 41, nearly half left the district because of retirement. Thus the Institute's cumulative influence in the New Haven school system and its likely effects upon retaining teachers are indicated by the fact that it has worked in the most sustained way with those who have chosen to remain in teaching in the New Haven Public Schools.

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Beyond the active teachers, there are now 30 members of the administration of the New Haven Public Schools who have participated as Fellows of the Institute for periods of one to twenty years. The presence of former Fellows in positions ranging from Assistant Principal and Principal at the school level to Associate Superintendent and Curriculum Supervisor at the central level has made the Institute more visible and has encouraged other teachers to participate in this program. By fall 2003, 10 of the district's 46 schools had former Institute Fellows as their principals. An additional 10 schools had assistant

Table 3
 Institute Fellows as a Percentage of Eligible
 New Haven *Secondary* School Teachers

	Middle Schools**	High Schools	Transitional Schools	Overall
English	46%	29%	25%	34%
History	21%	30%	0%	26%
Languages	25%	25%	25%	25%
Arts	19%	21%	0%	19%
Math	10%	23%	0%	17%
Science	27%	21%	25%	23%
Grade 5*	16%	n/a	n/a	16%
Grade 6	13%	n/a	n/a	13%
Grade 7	24%	n/a	n/a	24%
Grade 8	20%	n/a	n/a	20%
Total***	27%	32%	28%	30%

*Grade 5 teachers are included here for middle schools only; grade 5 teachers in elementary schools and K-8 schools are reported in Table 2.

**All K-8 school teachers of the subjects listed here count as Middle School teachers. K-5 teachers in K-8 schools count in Table 2.

***Includes teachers of interdisciplinary and other subjects. Art teachers from K-8 schools are placed based on the grades which they teach most often.

n/a = not applicable

principals or staff developers who were former Fellows, with the result that more than 40 percent of New Haven's public schools had former Institute Fellows in leading administrative roles.

In 1996 members of the National Advisory Committee suggested that the Institute engage in fuller documentation of its work beyond the seminars themselves, and of the wider effects of its program in the school system. They believed they were hearing from teachers and staff about many valuable results of the Institute's work that should be documented in forms that could be made more widely available. The Institute is therefore now documenting more fully the work of teams in the schools, the activities of the Centers and Academies, and the development of electronic resources. This documentation has been summarized in earlier sections of this report.

In addition to their worldwide circulation in electronic form, the curriculum units, the current *Guide* to the units, and the cumulative *Index* to the units are given annual circulation in print. They are distributed to current Fellows and seminar leaders, and to New Haven Public School supervisors and administrators, and are deposited in all school libraries in the district. They remain in print so that sets in the schools can be restocked when necessary.

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Annual Report: The Program in New Haven

*This Annual Report
itself is a massive
compilation of infor-
mation and statistics.*

This Annual Report itself is a massive compilation of information and statistics drawn from a variety of sources, including the questionnaires completed by Fellows and seminar leaders; reporting by school Representatives and Institute Center leaders; the tracking of all previous Fellows; statistics pertaining to the New Haven Public Schools, from both its central data and personnel offices; demographic analyses; minutes of meetings; project reports; reports from the Centers; reports from the new Institutes established during the National Demonstration Project; reports to funders; and entries in the Institute's Web site guestbook. The work that provides material for this Report extends over the entire year, and the Report is available online.

THE INSTITUTE WEB SITE

Electronic versions of the Institute's publications—including the volumes of curriculum units and essays and other work—are available at its Web site. (The address is <http://www.yale.edu/ynhti>.) The Web site played an important role during the National Demonstration Project, as a link in its network of information and a model for the Web sites of other Teachers Institutes, and it continues to be of importance as the Yale National Initiative proceeds. (The Yale National Initiative is also inaugurating in February 2004 a new Web site, which will include links to this Web site and to those of the other participating and allied Teachers Institutes. Its address is <http://teachers.yale.edu>. For a description of that Web site, see the section of this Annual Report on "The Yale National Initiative: Communication and Dissemination.") The full texts of almost all the units written between 1978 and 2003, plus an *Index* and *Guide* to these units, are thus available on-line to teachers in New Haven and elsewhere. Information about the Institute (its brochures and most recent Annual Reports) is also available, as is the text of its periodical *On Common Ground*. To call attention to this resource the Web location has also been advertised prominently on the cover of *On Common Ground*, which contains articles regarding school-university partnerships and is intended for a national audience.

The Institute has created a "guestbook" on its Web site, in order to invite comments and suggestions from those who have visited the site. (The new Web site for the Yale National Initiative will also invite e-mail comments on specific curriculum units and will provide forms on which may be entered information concerning teachers and schools.) In recent years the site has been used by more and more people in many parts of this country and abroad—

Yale-New Haven Teachers Institute

About the Institute

The Yale-New Haven Teachers Institute is an educational partnership between Yale University and the New Haven Public Schools designed to strengthen teaching and learning in local schools and, by example, in schools across the country.

For more information about the Institute's operation in New Haven, please see our [2004 Annual Brochure](#).

For more information about the Institute's work nationally, please visit the [new Web site](#) of the Yale National Initiative to strengthen teaching in public schools.

About this online service

This online service features:

- **Brochures and Reports:** about the Institute and its activities locally and nationally
- **Publications:** including books and the periodical *On Common Ground*
- **Published Essays and Public Testimonies:** about the concept, operation, and results of the Institute
- **Curricular Resources:** produced by New Haven teachers participating in Institute seminars at Yale
- **Transcripts:** of news conferences and other public presentations of the Institute

Search the YNHTI Website

Entire Site Units Only

Units and Guides Guides Only

visit the [Navigation Page](#) for complete search and site map

The teacher participants and staff of the Institute encourage you to visit this site often to check for new material.

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The Institute's Web site has been visited by approximately 3,000,000 different persons. Approximately 800,000 visited during 2003, when the site registered some 5,460,000 hits.

Yale-New Haven Teachers Institute Web site located at www.yale.edu/ynhti.

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teachers from both public and private schools (including Fellows from other Teachers Institutes in the National Demonstration Project and the Yale National Initiative), school and university administrators, parents, volunteers, university professors, high school students, graduate students, librarians, military personnel, home schoolers, local policy-makers, and others conducting research or having an interest in education. We estimate that from its inauguration in June 1998 through December 2003, this Web site has been visited by approximately 3,000,000 different persons. Of these, approximately 800,000 visited during 2003. The site registered some 5,460,000 hits during the year.

"The thoroughly researched units listed on the site have become a starting point for any project in education I complete."

—Teacher from Illinois

In 2003 we continued to hear from educators from a great many countries. A partial list would include elementary and secondary school teachers, university professors, and researchers from Pakistan, Austria, Israel, India, Brazil, Thailand, Trinidad and Tobago, Nepal, Canada, Greece, China, Germany, Vietnam, the United Arab Emirates, Argentina, Guam, and South Africa. (The partial list for 2002 also included the United Kingdom, Mexico, Algeria, Egypt, Australia, France, Taiwan, the Netherlands, Iran, the Philippines, Yemen, Venezuela, Romania, North Vietnam, Indonesia, and Singapore.) A correspondent in Austria, who is engaged in American Studies research and future teaching, has used the material and will recommend the site to friends who are teaching English in Austrian high schools. An acting teacher in Athens, enthusiastic about the curriculum units in theatre, is translating some units for use in a book she is preparing. A consultant to school library services, in the Education and Manpower Bureau in China, has for two years praised the usefulness of this curriculum database. And a social researcher in Johannesburg, South Africa, has likewise found them of great interest.

"The archive of the Institute's participant research and the extensive bibliographies have been a delightful surprise to me. This is what the Internet was supposed to be!"

—Teacher from California

From various parts of the United States came similar statements. A teacher in Virginia said: "I am so moved by this Web site. . . . Keep it up; teachers need this!" A teacher in Texas found the units "wonderful and refreshing." A teacher now in training in Illinois said, "The thoroughly researched units listed on the site have become a starting point for any project in education I complete." A teacher at the Fisher's Island Correctional Facility found certain units to be most helpful in classes for female adolescents. A teaching assistant in Meridian, MS said: "I have really appreciated finding a site that so generously fills the needs of those in all areas of classroom teaching. But especially those of us who are interested in educating our children in their history through the use of their literature, art, and song." A teacher in New York said, "I wish our local college could have such a resource." Another public school teacher said: "I have been visiting this site for years." And a teacher in California said: "The archive of the Institute's participant research and the extensive bibliographies have been a delightful surprise to me. This is what the Internet was supposed to be!"

An education librarian at the University of Wisconsin-Oshkosh said: "I've shown this Web site to several college-level education classes that come

to the library for instruction." An educational consultant to public schools stated: "Your resources have been invaluable to me in helping teachers develop units of instruction." A college teacher in New York said: "Your school system is lucky to have such creative teachers." A public school teacher and university adjunct in Pennsylvania said: "This is a tremendous opportunity for New Haven schools. The vast array of educational information available through this partnership would be a boost to any school curriculum."

Some of the units were very helpful to an educational researcher based at a center in the University of Minnesota that is "looking for ways to integrate more rigorous mathematics into traditional vocational fields such as health, automotive, and information technology." A researcher in the Graduate School of Education at Harvard also recommended curriculum units to primary school teachers in New York City and Belmont, MA. And the author of an article for the *American School Board Journal* drew on several units concerning writing at the secondary school level.

The "guestbook" also contains some delightful surprises. A National Park Ranger at Cape Hatteras was "thrilled with its depth and content." A high school student in biology found the site very useful in his individual preparations—as did a new teacher at a Navajo preparatory school in New Mexico. And a recent Yale graduate now working with AmeriCorps VISTA praised the Institute seminars and curriculum units as "one of the ways in which Yale is working to strengthen its ties with its host community."

Indeed, the curriculum units prepared by Fellows of the Yale-New Haven Teachers Institute have demonstrated their usefulness in a great many different ways for teachers who are engaged within a wide range of subjects and with who have received many kinds of preparation. Their responses this year—like those we have mentioned in previous Annual Reports—continue to refute the mistaken notion that such curriculum units are unchangeable exercises that are of use only to their writers.

"This is a tremendous opportunity for New Haven schools. The vast array of educational information available through this partnership would be a boost to any school curriculum."

*—Teacher from
Pennsylvania*

THE YALE NATIONAL INITIATIVE

The Aims of the Yale National Initiative

Building upon the success of the four-year National Demonstration Project, the Yale National Initiative promotes the development of new Teachers Institutes.

Building upon the success of the four-year National Demonstration Project, the Yale National Initiative promotes the development of new Teachers Institutes that adopt the approach to professional development that has been followed for more than twenty-six years by the Yale-New Haven Teachers Institute. Teachers Institutes focus on the academic preparation of school teachers and on their application in their own classrooms of what they study in the Institute. By linking institutions of higher education with school districts where the students are mainly from low-income communities, Institutes strengthen teaching and learning in public schools and also benefit the institutions whose faculty members serve as seminar leaders. Each Institute also helps to disseminate this approach, encouraging and assisting other institutions and school districts as they develop similar programs in their own communities.

A Teachers Institute places equal emphasis on teachers' increasing their knowledge of a subject and on their developing teaching strategies that will be effective with their students. At the core of its program is a series of seminars on subjects in the humanities and sciences. Topics are suggested by the teachers based on what they think could enrich their classroom instruction. In the seminars the university or college faculty members contribute their knowledge of a subject, while the school teachers contribute their expertise in elementary and secondary school pedagogy, their understanding of the students they teach, and their grasp of what works in the crucible of the classroom. Successful completion of a seminar requires that the teachers, with guidance from a faculty member, each write a curriculum unit to be used in their own classrooms and to be shared with others in the same school and other schools through both print and electronic publication.

Throughout the seminar process teachers are treated as colleagues. Unlike conventional university or professional development courses, Institute seminars involve at their very center an exchange of ideas among school teachers and university or college faculty members. The teachers admitted to seminars, however, are not a highly selective group, but rather a cross-section of those in the system, most of whom, like their urban counterparts across the country, did not major in one or more of the subjects they teach. The Institute approach assumes that urban public school teachers can engage in serious study of the field and can devise appropriate and effective curricula based on this study.

The National Demonstration Project

Supported by a major grant from the Wallace Foundation and a supplementary grant from the McCune Charitable Foundation, the National Demonstration

Project showed that Teachers Institutes based on the principles grounding the Yale-New Haven Teachers Institute can be established and sustained in other cities where the pattern and magnitude of needs and resources are different from those in New Haven. It did so in a variety of institutional contexts, with the participation of liberal arts colleges, private universities, and state universities, acting individually or in a consortium. Institutions that have long had departments or schools of education are now devoting a good deal of their energy to providing seminars for teachers in the liberal arts and sciences. By establishing Institutes from coast to coast, by setting in motion a National Steering Committee of school teachers and a National University Advisory Council (of university and college faculty members), and by holding a series of Annual Conferences, the National Demonstration Project laid the groundwork for a national network of such Teachers Institutes.

The project showed that Teachers Institutes based on the principles grounding the Yale-New Haven Teachers Institute can be established and sustained in other cities.

In 1997 the Yale-New Haven Teachers Institute had designed the Demonstration Project, surveyed and visited likely sites, and selected fourteen sites to be invited to apply for Planning Grants. In 1998 it provided those sites with extensive information concerning the Institute's policies and procedures. On recommendation of a National Panel, it then awarded Planning Grants to five applicants. Their eight months of planning included a ten-day "July Intensive" in New Haven, during which Planning Directors and teams of university faculty members and school teachers participated in a varied program of activities that were designed to initiate them into the Institute process. Teachers took part in National Seminars (truncated versions of New Haven seminars) led by Yale faculty members, and also observed local seminars. University faculty members observed both types of seminars and, with the advice of Yale faculty members, wrote seminar proposals. Planning Directors also observed both types of seminars, attended workshops on Institute principles and procedures, and, with the advice of the Director of the Yale-New Haven Teachers Institute, prepared proposals to establish Teachers Institutes.

Then, again on recommendation of the National Panel, the Yale-New Haven Teachers Institute awarded three-year Implementation Grants to four applicants: the Pittsburgh Teachers Institute (a partnership among Chatham College, Carnegie Mellon University, and the Pittsburgh Public Schools); the Houston Teachers Institute (a partnership between the University of Houston and the Houston Independent School District); the Albuquerque Teachers Institute (a partnership between the University of New Mexico and the Albuquerque Public Schools); and the UCI-Santa Ana Teachers Institute (a partnership between the University of California at Irvine and the Santa Ana Unified School District). These Institutes exemplified a wide range of institutional type, city size, and opportunities for funding.

From 1999 through 2001 the Yale-New Haven Teachers Institute monitored the new Institutes and helped them to become established as members of a collaborative network. It did so through a multitude of efforts, including a second "July Intensive"; three Annual Conferences; annual meetings of the

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Directors, the National Steering Committee (of teachers), and the National University Advisory Council (of faculty members); and many site visits and consultations. During those three years the Pittsburgh Teachers Institute offered 17 seminars, led by 11 different faculty members, in which 145 Fellows wrote curriculum units. The Houston Teachers Institute offered 17 seminars, led by 15 different faculty members, in which 129 Fellows wrote curriculum units. The Albuquerque Teachers Institute offered 20 seminars, led by 18 different faculty members, in which 157 Fellows wrote curriculum units. And the UCI-Santa Ana Teachers Institute offered 23 seminars, led by 18 different faculty members, in which 146 Fellows completed 151 curriculum units. All of these curriculum units were circulated in printed copies and on Institute Web sites.

Within these Institutes the teachers have found a greater creative responsibility for their own curricula, and they have found an opportunity to exercise leadership and judgment in sustaining the program of seminars that provides a continuing professional development. The university faculty members have also recognized more fully their responsibility for teaching at all levels in their own communities. As this has occurred, both the school teachers and the university faculty members have discovered their true collegiality in the on-going process of learning and teaching. And they have realized both the opportunities and the responsibilities that follow from their membership in a larger community devoted to the educational welfare of the young people of this nation.

The Yale-New Haven Teachers Institute monitored the new Institutes and helped them to become established as members of a collaborative network. It did so through a multitude of efforts, including a second "July Intensive."



The national seminar on "Human-Environment Relations: International Perspectives from History, Science, Politics, and Ethics," held during the 1999 July Intensive. (Clockwise from left: William J. Pisciella, Houston; Thomas R. Mace, Albuquerque; Elizabeth A. Enloe, Santa Ana; Verna Arnold, Pittsburgh; seminar leader John P. Wargo, New Haven; and Jurrell L. Gilliam, Houston.)

Like the Yale-New Haven Teachers Institute, each of the four new Teachers Institutes involved in the National Demonstration Project serves an urban school district that enrolls students most of whom are not only from low-income communities but also members of ethnic or racial minorities. In New Haven 54 percent of the students in the district are African American and 31 percent are Hispanic. In Pittsburgh, 56 percent of the students are African American. In the participating schools in Houston, 30 percent of the students are African American and 50 percent are Hispanic. In the participating schools in Santa Ana, more than 90 percent of the students are Hispanic, and more than 70 percent have limited English. As the Teachers Institutes enable teachers to improve their preparation in content fields, prepare curriculum units, and accept responsibility for much of their own professional development, they also help large numbers of minority students to achieve at higher levels by improving teaching and learning.

During the three years of the National Demonstration Project all four of the new Institutes met the very difficult funding challenge posed by the terms of the Implementation Grants they were offered. And in December 2001, all four Institutes declared their intention to apply for Research and Planning Grants in the Preparation Phase of the Yale National Initiative.

The National Demonstration Project made amply clear the importance of the principles upon which these Institutes are based. It showed that, given favorable circumstances, the new Teachers Institutes can sustain themselves after the initial Grant. It has provided the foundation for the expansion of some Teachers Institutes and the establishment of yet others in cities across the nation. And it showed that such Teachers Institutes can make a substantial contribution to the most important kind of school reform in this nation—the improvement of teaching itself.

The National Demonstration Project showed that such Teachers Institutes can make a substantial contribution to the improvement of teaching itself.

The Preparation Phase

The Preparation Phase of the Yale National Initiative (April 2002-June 2004) has led to yet further success in two of these new Institutes. The Pittsburgh Teachers Institute and the Houston Teachers Institute applied for and, on recommendation of a National Panel, received Research and Planning Grants. These grants, supported by an extension of unexpended funds from the Wallace Foundation and a grant from the Jessie Ball duPont Fund, have enabled them to conduct both qualitative and quantifiable research into the effectiveness of their programs and to plan for future systemic impact within their school districts.

Though the Albuquerque Teachers Institute was prevented by administrative problems in the Albuquerque Public Schools from applying for a Research and Planning Grant, it has continued under the aegis of the College of Arts & Sciences of the University of Mexico and is expanding into other school districts. And though the UCI-Santa Ana Teachers Institute was likewise pre-

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vented by the financial crisis in California from applying for such a Grant, and was temporarily suspended, the University and its faculty members continue to maintain strong relationships with teachers and administrators in Santa Ana and several other districts.

During the Preparation Phase the Pittsburgh Teachers Institute and the Houston Teachers Institute have not only sustained but also expanded and deepened their programs.

During the Preparation Phase of the Yale National Initiative, the Pittsburgh Teachers Institute and the Houston Teachers Institute have not only sustained but also expanded and deepened their programs. In 2002, the Pittsburgh Teachers Institute mounted seven seminars, two of which were developed in collaboration with the Pittsburgh Public Schools. In 2003, this Institute mounted eight seminars, three of which were developed in collaboration with the Pittsburgh Public Schools. In 2002 the Houston Teachers Institute also mounted seven seminars, one of which was funded by Project TEACH, a partnership between the Institute and the Houston Independent School District supported by the U.S. Department of Education. In 2003 this Institute mounted eight seminars, two of which were funded by Project TEACH.

During this Preparation Phase, the Yale National Initiative has continued to advise and support these Teachers Institutes. It hosted an Annual Teachers Institute Conference in November 2002, in which teams from the Pittsburgh Teachers Institute, the Houston Teachers Institute, and the Yale-New Haven Teachers Institute participated. This Conference discussed, and enthusiastically endorsed, the principles and accomplishments of the Teachers Institutes. It also made suggestions with regard to the future work of the Yale National Initiative and indicated a readiness to participate in it. After the Conference,

The Conference enthusiastically endorsed the principles and accomplishments of the Teachers Institutes.



Michael Marsland

Teachers Institutes Conference in New Haven, November 2002. (Left to right: Michael Field, Houston; Patricia Y. Gordon, Pittsburgh; Jean E. Sutherland, New Haven; and Ben Vera, Houston.)

representatives from the Pittsburgh and Houston Teachers Institutes discussed their own on-going work in research and planning.

During this Phase the Yale National Initiative has also developed a more integrated and somewhat expanded version of the Basic Principles underlying the National Demonstration Project—now included in a booklet on the Yale National Initiative as "Articles of Understanding" and "Necessary Procedures." These documents were also discussed by the Directors of the three Institutes in their meeting of July 2003. They now serve as a primary basis for proposals for the establishment of new Teachers Institutes under the Yale National Initiative. Also developed during the Preparation Phase are other elements of the framework that will be used for planning and implementing any new Institute, regardless of the nature of the funding that has been sought or obtained. That framework allows for a variety of possible funding—by a Federal or State program, by a national or local foundation, by a school district (through a variety of federal and other sources), or by a college or university—which might be provided directly to the new Institute or indirectly through the Yale National Initiative. The information provided in the booklet on the Yale National Initiative under "Proposals for Planning an Institute" and "Proposals for Implementing an Institute" specifies what such proposals should contain.

The Initiative has developed a more integrated and somewhat expanded version of the Basic Principles—now included in a booklet as "Articles of Understanding" and "Necessary Procedures."

Documentation, Evaluation, and Independent Studies

The Yale-New Haven Teachers Institute and the Yale National Initiative regard both internal and external evaluation of their principles, practices, and results to be of the utmost importance. For more than a quarter of a century the Yale-New Haven Teachers Institute has arranged for, and learned from, both internal and external evaluations. The National Demonstration Project and the Preparation Phase of the Yale National Initiative have continued that process of multiple evaluation. The internal evaluations, based in part upon observations in site visits and conferences, the results of questionnaires, published curriculum units, and Annual Reports from participating Institutes, have been embodied in Annual Reports to the funding organizations. They have been supplemented by external evaluations of several kinds.

For more than a quarter of a century the Yale-New Haven Teachers Institute has arranged for, and learned from, both internal and external evaluations.

The Wallace Foundation commissioned an external evaluation of the National Demonstration Project conducted by Policy Studies Associates. As part of its research and planning, the Pittsburgh Teachers Institute commissioned an evaluation, using focus groups, carried out by Allyson Walker, of Cornerstone Evaluation Associates, and Janet Stocks, Director of Undergraduate Research at Carnegie Mellon University. As part of its research and planning, the Houston Teachers Institute commissioned a massive evaluation, using focus groups, interviews, surveys, and both quantitative and qualitative analysis, carried out by Jon Lorence and Joseph Kotarba of the Department of Sociology, University of Houston, and a further evaluation, based on interviews and observation of teaching, by Paul Cooke, Director of the Institute. The Yale-New Haven Teachers Institute also commissioned an

evaluation of the entire National Demonstration Project, carried out by Rogers M. Smith of the Department of Political Science, University of Pennsylvania, and his research assistants, that was based primarily on analyses of Fellows' questionnaires and of the survey of the use of curriculum units by Fellows and non-Fellows.

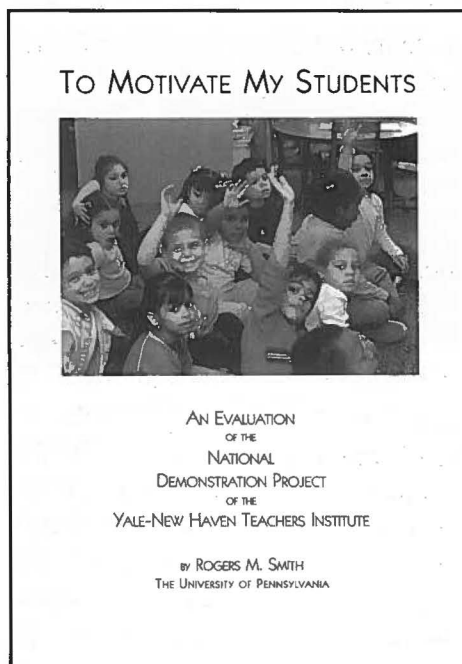
Though differing in their procedures and to some extent in their detailed results, these evaluations lend support to a number of important conclusions. At all four sites, there were positive results similar to those that had been obtained in New Haven over many years. Both Policy Studies Associates and Rogers M. Smith concluded that the National Demonstration Project had "succeeded in reaching its goal" of replication of the Yale-New Haven model within a relatively short period of time in four sites that are considerably larger than New Haven. Overall, new Institutes involved roughly 900 teachers and 60 college or university faculty members in 75 seminars over the course of the Project. Smith noted that these seminars produced results that were remarkably similar to each other and to experiences in New Haven, and markedly better than those reported by most existing forms of professional development. These results occurred despite significant demographic differences among the cities. The major variations, according to Smith, could be correlated with structural departures from National Demonstration Project guidelines and with certain administrative difficulties in the partnering districts and institutions of higher education.

As Smith pointed out, recent research indicates that the single most important factor in student performance is teacher quality. The consensus of researchers and teachers is that many existing forms of professional development are cursory, dreary exercises that leave teachers bored and resentful, not informed or inspired. The approach of the Yale-New Haven Teachers Institute, however, significantly strengthens teachers in all five of the major dimensions

of teacher quality: it helps to produce teachers who really know their subjects; who have good basic writing, mathematics and oral presentation skills; who expect their students to achieve; who are enthusiastic about teaching; and who can motivate all children to learn.

According to Smith's analysis, teachers in the new Institutes chose to participate out of desires to improve themselves in exactly these areas. At each site, teachers participated out of desires to obtain curriculum suited to their needs, to increase their mastery of their subjects, and especially to obtain materials to motivate their students. According to the research in Pittsburgh,

Smith found that the approach of the Yale-New Haven Teachers Institute significantly strengthens teachers in all five of the major dimensions of teacher quality.



moreover, teachers "find the Institute to be the best professional development they ever had" because its seminars increase their knowledge, emphasize content, not pedagogy, have direct applicability to their classrooms, encourage them to be creative, and are spread over sufficient time to allow them to master the content. The Pittsburgh teachers also reported that they were attracted to the Institute by the independence they enjoyed in suggesting seminar topics and then selecting those seminars in which they would participate without regard to the subject or grade levels at which they taught. According to the research in Houston, the Institute program "cultivates a significant increase in skill level for those many Fellows who were never really trained earlier in the design and implementation of a very workable, thought-out, substantively well-informed curriculum unit." Teachers therefore "take ownership of big corners of the fields of knowledge in which they labor and take that possession over to their students."

According to Smith, ninety-five percent of all participating teachers rated the Institute seminars "moderately" or "greatly" useful. Similar percentages said the seminars increased their knowledge, improved their skills and morale, and raised their expectation of students. Both teachers and principals who participated in the Pittsburgh study reported that the Institute experience boosts teachers' positive attitudes toward teaching and learning because: it excites teachers about learning and their excitement is transferred to their students; it enhances teachers' self-image and sense of direction; it augments teachers' sense of professionalism; it encourages collaboration among teachers; and it provides teachers with a network of resources. Smith also found that the Institutes served to foster teacher leadership, to develop supportive teacher networks, to heighten university faculty commitments to improving public education, and to foster more positive partnerships between school districts and institutions of higher education.

The Houston study concludes on the basis of interviews with Fellows, a survey, and observation of students "that students of HTI Fellows benefit from instruction informed by solid scholarly values, not simply bureaucratic curriculum requirements." It indicates also that "students benefit from the presence of teachers who can serve as role models of intellectualism, commitment, and excellence."

According to Smith, after teaching their curriculum units, two-thirds of all participants rated them superior to all other curriculum they had used. Roughly sixty percent of all participants rated student motivation and attention as higher during these units, producing substantially greater content mastery. The teachers and principals who participated in the Pittsburgh study also reported that the students learned new ways of thinking, questioned what they read and saw, made connections among various subjects, eagerly learned content set within a familiar context, and acquired and implemented research skills modeled by the teachers. These curriculum units, as Smith noted, emphasized teacher-led discussion, writing exercises, activities designed to strengthen speaking, listening, vocabulary, reasoning skills, and mathematics skills. The

Ninety-five percent of all participating teachers rated the Institute seminars useful.

"After teaching curriculum units, two-thirds of all participants rated them superior to all other curriculum they had used."

— Rogers M. Smith

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research in Houston indicated that "all categories of students benefit from teachers who have completed a Houston Teachers Institute seminar: skilled and unskilled; English speaking and ESL; Anglo and minority; and gifted, mainstreamed, or special education students."

All four studies do suggest that it would be fruitful to engage in yet further research concerning ways of assessing student learning in classes where Institute units have been taught. The Wallace Foundation, in supporting the National Demonstration Project, had explicitly excluded such research because of its firmly grounded belief that the most significant factor in producing increased student learning is teacher quality. And with regard to that factor, the more detailed studies in Pittsburgh and Houston confirm and extend the positive conclusions that have been reached by Policy Studies Associates and by Smith in their analyses of the National Demonstration Project.

"Large majorities of Fellows were unequivocal in saying that their experience in the institutes gave them a real sense of accomplishment and re-kindled their excitement about learning."

— Policy Studies Associates

According to the report from Policy Studies Associates, there is "clear evidence of important accomplishments, reflected in the number of seminars provided in the institutes, the number of Fellows who participated in these seminars, and the number of curriculum units the Fellows produced." It stated further:

Large majorities of Fellows were unequivocal in saying that their experience in the institutes, especially the preparation of a curriculum unit, gave them a real sense of accomplishment and re-kindled their excitement about learning. As one Fellow put it: "To be teachers, we must also be learners." When asked in interviews to compare their experience in the institutes with their experience in other kinds of professional development, teachers agreed that the institutes are vastly superior.

The report by Rogers M. Smith concluded:

No single program can overcome the enormous obstacles to educational achievement faced by economically disadvantaged students, usually from racial, ethnic, and linguistic minorities, in large American cities today. But if recent researchers are right to contend that the single most important factor in student achievement is teacher quality, and if quality teachers are indeed knowledgeable, skilled, and enthusiastic, with high expectations for their students and the means to motivate students to reach those expectations, then the National Demonstration Project provides strong evidence for the value of the Teacher Institute approach.

A League of Teachers Institutes

The three Teachers Institutes participating in the Yale National Initiative now comprise a League of Teachers Institutes, which over time will develop its own procedures. Each of these Institutes engages the serious educational problems associated with low-income communities and a high proportion of racial and

ethnic diversity. Each illustrates, however, a somewhat different pattern of needs and relationships to local resources, institutional apparatus, and state mandates. Each may therefore serve as one example for the establishment of Teachers Institutes elsewhere in the United States. The two new Institutes are serving school systems that are considerably larger than that of New Haven. In Pittsburgh the partnership includes a private university focused upon the sciences and a small liberal arts college that has a strong Education program. In Houston the partnership includes a state-supported urban university that includes a college of Education. These Teachers Institutes show that a successful professional development program in the humanities and sciences can exist in each of these institutional contexts. The Yale-New Haven Teachers Institute has had for over a quarter of a century a very significant impact upon its school district. And the two new Institutes, after their successful start during the National Demonstration Project, are now adopting somewhat different scopes and strategies that are directed toward having such an impact upon yet larger districts.

The Pittsburgh Teachers Institute

The Pittsburgh Teachers Institute, bringing the resources of Chatham College and Carnegie Mellon University to a school district that now has 95 schools serving 38,000 students, began in 1999 by working with 20 elementary, middle and high schools, representing the three regions of the district. In 2001 the Institute reached out to several other schools, and in 2002, after the National Demonstration Project, it opened its program yet more widely across the school district. The Director, Helen Faison, an experienced teacher and school administrator, is former chair of the Education Department at Chatham College and a former interim Superintendent of Schools.



Michael Marsland

Pittsburgh Teachers Institute's five-year anniversary celebration held at Chatham College, June 2003.

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Chatham College brings to the collaboration with the Pittsburgh Public Schools the strengths of a small liberal arts college; Carnegie Mellon brings those of a university with a strong program in the sciences. Although both institutions have previously worked with the schools—Carnegie Mellon, for example, sponsoring a program in the teaching of science, and Chatham maintaining a program in teacher certification—this is the first collaboration between the two institutions in partnership with the schools.

In 2002 the Institute mounted seven seminars, two of which were developed in collaboration with the Pittsburgh Public Schools. These included "Learning Science by Doing Science," "A Restless People: Americans on the Move, 1760-1900," "Comedy: From Aristophanes to the Present," "Everyday Science," "Genetics and Genomes," "Latin American and U.S. Popular Culture," and "A Survey of African-American History by Way of African-American Literature and Art." There were 55 curriculum units completed by the Fellows.

In 2003 the Institute offered eight seminars, three of which were planned in collaboration with school district staff. The Fellows completed 60 curriculum units. Seminar topics were: "Coming Over: The Old Immigration," "Looking at Everyday Mathematics," "Learning Science by Doing Science II-Electronics," "Integrating Musical Theater into the Curriculum," "Pittsburgh Rivers," "Reading and Teaching Poetry," "U.S. Latino Literature and Culture," and "Understanding Nonfiction Genres."

From the beginning all of the seminars have been approved for increment credit, which qualifies participating teachers for salary increases with the School District. Since 2001 they have been approved by the Pennsylvania Board of Education for Act 48 credit, which the State of Pennsylvania requires that teachers earn to retain their teacher certification. The Institute has also made a strong effort to relate the curriculum units explicitly to the national, state, and local standards that all Pittsburgh Public School curricula must meet.

The Houston Teachers Institute

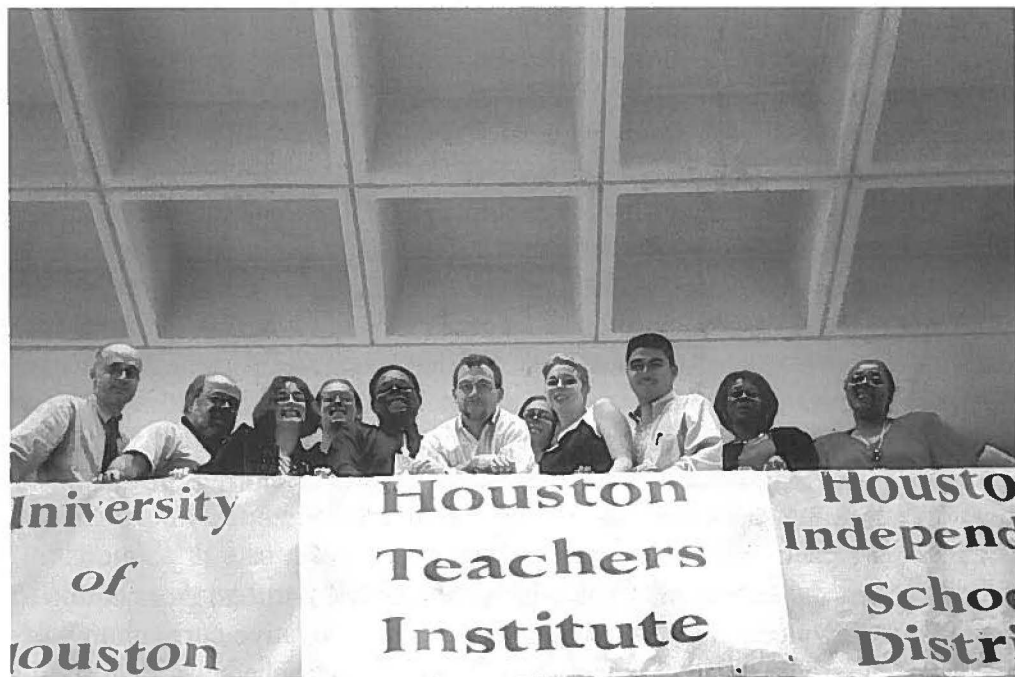
In the fourth largest city in the United States, the Houston Teachers Institute brings the resources of the University of Houston to the Houston Independent School District, where 280 schools serve 212,000 students. The Houston Teachers Institute builds upon the experience of the Common Ground project at the University, directed first by James Pipkin and then by William Monroe, which assisted high school teachers in expanding the canon of literary texts that are taught in English classes. The late Michael Cooke, a Yale faculty member and participant in the Yale-New Haven Teachers Institute, had served as an advisor for that project.

The Houston Teachers Institute began its work with 20 self-selected middle and high schools enrolling 31,300 students to establish a program that

would address the needs of an ethnically mixed student-body, a large proportion of whom are non-English speaking. In 2001 the Institute admitted Fellows from 27 schools; and it has now opened its program to a yet wider range of schools. Paul Cooke, who had been a Visiting Assistant Professor of Political Science, serves as Director.

In 2002 this Institute mounted seven seminars, one of which was funded by Project TEACH, a partnership between the Institute and the Houston Independent School District supported by the U.S. Department of Education. They included: "Ethnic Music and Performing Arts in Houston," "Houston Architecture: Interpreting the City," "New Developments in Understanding the Human Body," "Reflections on a Few Good Books," "Shakespeare's Characters: The Lighter Side," "Sports Autobiographies: Mirrors of American Culture," and "Drinking Water: Finding It; Making It Clean; Using It Wisely." There were 69 curriculum units completed by the Fellows.

In 2003 the Institute offered eight seminars, two with the support of Project TEACH: "The 20th Century's Most Significant English-Language Books for Children and Young Adults," "Heroes and Heroines in History and Imaginative Literature," "African American Slavery in the New World: A Different Voice," "Literature as Healing Balm: Multicultural Women Writers in America," "There's No Place Like Home: Architecture, Technology, Art, and the Culture of the American Home, 1850-1970," "From FDR's Death to the Resignation of Richard Nixon: America from 1945 to 1974," "Understanding the Wild Things Next Door: The Nature of Houston," and "The Science in Science Fiction." Fellows completed 85 curriculum units.



Paul D. Cooke

Teacher Representatives of the Houston Teachers Institute in 2000. (Left to right: Daniel Addis, William J. Piscicella, Gwen Lindsay, Michael Olson, Richard Evans, Charles Sauter, Carrie Mitchell, Amber Mackel, Jorge Arrendondo, Mary Jefferson, and Jurrell L. Gilliam.)

Communication and Dissemination

The Yale-New Haven Teachers Institute has continued to provide the new Teachers Institutes with a range of technical assistance.

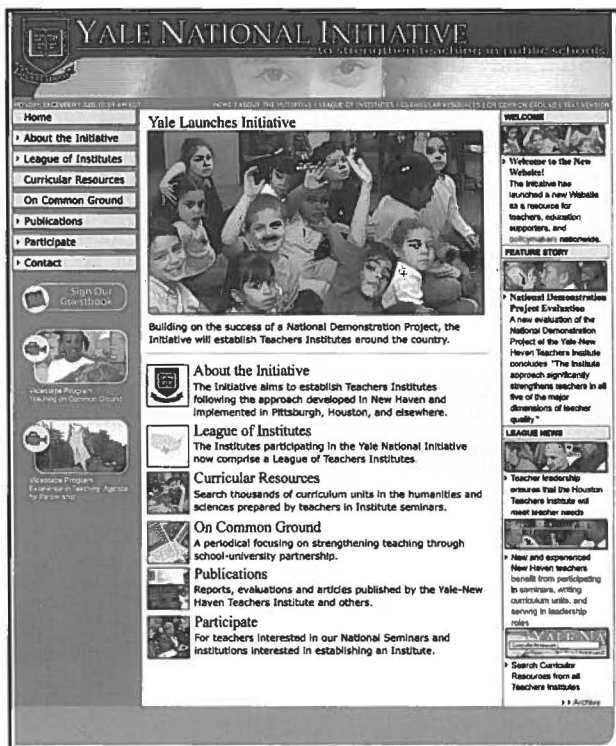
This League of Teachers Institutes has already established an appropriate network of communication. During the Preparation Phase the Yale-New Haven Teachers Institute has continued to provide the new Teachers Institutes with a range of technical assistance, which includes the sharing of research, advice on specific problems, meetings of the Directors, and a fourth Annual Conference. Each year the new Teachers Institutes have submitted reports, described in the section on Documentation and Evaluation, to the Yale-New Haven Teachers Institute. During this Phase there has continued to be lateral communication among the new Teachers Institutes, and common work undertaken by members of the League of Teachers Institutes and school teachers and university faculty members from affiliated Institutes.

The National Steering Committee, which consists of two teachers from each Institute in the League, has continued to take a major initiative in planning this common work and encouraging communication among the teachers at the various sites. It is complemented by the National University Advisory Council, which consists of two faculty members from each Institute.

The Web site of the Yale-New Haven Teachers Institute already makes available the publications of this Institute, including all of its curriculum units. Other Institutes have established similar Web sites. A developing electronic network is therefore linking the Institutes more closely. The League is also seeking ways to increase electronic communication among the school teachers and university faculty members who participate in its Institutes. A Web site—<http://teachers.yale.edu>—has now been created that is dedicated to the Yale National Initiative as an entity, with links to Teachers Institutes that are members or affiliates of the League of Teachers Institutes. This Web site is not only a communications hub for the work of the Project but also an important continuing means of disseminating its results to the nation.

The new Web site provides regularly updated announcements and other information about the activities of the National Initiative and the members of the League of Teachers Institutes. Visitors will find descriptions of the Teachers Institute model of university-public school partnership for improving teaching through teacher-initiated seminars led by university experts in fields in the humanities and the sciences. The Web site also provides information on the teacher-leadership principles underlying governance of Teachers Institutes as well as access to resources for those interested in exploring the establishment of a new Teachers Institute.

Teachers and others may also click on the Curricular Resources button to search and download any of the more than 2,000 innovative curriculum units for K-12 classroom use that have been developed by teachers as one result of their participation. The site also provides issues of the periodical *On Common Ground*) and video materials about the Yale-New Haven Teachers Institute in



several forms that can be downloaded. It offers an opportunity, as well, for those who visit the Web site to provide comments on curriculum units and other material. As other Teachers Institutes are established, this Web site will assume even greater importance as a national center of information on university-school partnerships.

The new Web site provides regularly updated announcements and other information about the activities of the National Initiative and the members of the League of Teachers Institutes.

The periodical *On Common Ground* is potentially an important means of disseminating the results of the Yale National Initiative. Number 9, for Winter

2000/2001, contained articles by persons from each of the sites on some aspect of the process of establishing a Teachers Institute and meeting the needs of an urban school district. In a similar fashion, Number 10 of *On Common Ground* will provide a summarizing account of the National Demonstration Project, the Preparation Phase of the Yale National Initiative, and plans for the League of Teachers Institutes. It will contain the results of the four studies mentioned above, with some other material contained in the new booklet, and contributions from persons who have been working with Institutes in the Yale National Initiative.

Expansion and Systemic Impact

The expansion of existing Teachers Institutes in large cities may occur through a step-by-step process of scaling up, as more school teachers and university faculty become interested in participating, and as increased funding allows the offering of more seminars. A Teachers Institute may begin in this way to expand its scope of operation within a city. When the resources of a single institution of higher education are not adequate to meet the needs of a large school district, it may prove desirable to expand the partnership. There seems a possibility, for example, of expanding the partnership between Chatham College and Carnegie Mellon University to include other institutions in Pittsburgh. It also may be possible at some point for the Houston Teachers Institute to draw upon faculty from other institutions of higher education in Houston.

There are also opportunities for other kinds of expansion or increased systemic impact within a given scope. Teachers Institutes may wish to estab-

As all three members of the League have recognized, an Institute may increase its systemic effect by distributing curriculum units, maintaining a Web site that is easily accessed, and making itself known as a visible example of high-quality professional development.

lish Centers for Curriculum and Professional Development in the schools, as has been done in New Haven, which may bring to a higher proportion of relevant classroom teachers the work of Fellows in the Institute. Through such Centers they may wish to establish Academies in summer or after school, as has also been done in New Haven, in which teachers may collaboratively shape a curriculum for selected students on the basis of their work in the Institute. An Institute may also seek to relate its work quite explicitly to state and local requirements for teachers, as the Pittsburgh Teachers Institute has done. Or, as all three members of the League have done, an Institute may choose to address in certain of its seminars those subjects that have been designated as of signal importance by the school district. This may occur through discussions about possible offerings over the next several years, as in New Haven, or through contractual arrangements and partial funding for specific seminars, as in Pittsburgh and Houston. Finally, as all three members of the League have recognized, an Institute may increase its systemic effect by distributing curriculum units, maintaining a Web site that is easily accessed, and making itself known as a visible example of high-quality professional development.

Membership and Affiliation

New Teachers Institutes may be established at other sites through many different ways. Funding might be provided wholly or in part by a Federal or State program, a national or local foundation, a school district that channels government funds to an Institute, or a college or university. Such funding might be provided directly to a new Institute or indirectly through grants to the Yale National Initiative. Institutes that have been established through the Yale National Initiative will have already accepted the "Articles of Understanding" and "Necessary Procedures" given in the booklet on the Yale National Initiative (and included on its Web site), and may then become members of the League of Teachers Institutes. That process will enable them to continue to receive technical assistance and collaborative support from other members of the League.

Other Teachers Institutes, whether established through the Yale National Initiative or through other means, may not be committed to the "Understandings" and "Necessary Procedures" but may share certain of the aims of the League of Teachers Institutes. Such Institutes may ask to be recognized not as members of the League but as affiliated Institutes. The League of Teachers Institutes seeks to remain in close touch with such affiliated Institutes, and will invite selected school teachers and university faculty members from those Institutes to participate in certain of its activities.

FINANCIAL PLANS

For the local program, the Yale-New Haven Teachers Institute is currently seeking funds that might be used for seminars in either the humanities or the sciences. Its major long-term need is for an endowment that would provide continuing support for seminars in the sciences. The existing endowment for the Teachers Institute is limited to support for seminars in the humanities, and the teachers' expressed need for seminars in the sciences remains strong.

On the national level, as we have said, the Teachers Institute has developed a plan for a fourteen-year continuing initiative, to be known as the Yale National Initiative, that will establish as many as 45 additional Teachers Institutes throughout the nation. The Yale National Initiative has included a two-year Preparation Phase, which began in 2002 and will be followed by a twelve-year Implementation Phase. Support for the Preparation Phase was made possible through an extension of the National Demonstration Project by the Wallace Foundation into 2003 and a new grant from the Jessie Ball duPont Fund.

The Teachers Institute has developed a plan for a fourteen-year continuing initiative.

During the Implementation Phase, funds will be needed to:

- establish a national League of Teachers Institutes, with appropriate staff and technical support;
- provide renewable Implementation Grants for the participating Teachers Institutes already established, in order to assure their viability, their scaling-up to serve their own urban sites, and their contribution to the process of establishing new Teachers Institutes;
- enable the Yale-New Haven Teachers Institute and, to some extent, the other participating Institutes, to make initial contacts, carry out visits to interested sites, establish an annual July Intensive in New Haven, and maintain Annual Conferences;
- sustain the publication of *On Common Ground*, which will serve as a means of disseminating information about the progress and results of the National Initiative;
- and provide eight-month Planning Grants and three-year renewable Implementation Grants to the new Teachers Institutes being established.

Funds will also be needed to provide research and technological assistance for the national League of Teachers Institutes.

The funding described above might best be provided by a partnership between Yale University and one or more major foundations, which would work with us in accomplishing the plan. That funding might be supplemented

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as necessary by other major grants or lesser grants. The grants might be administered by the partnership, by individual foundations, or by the office of the Director of the Yale National Initiative. The projected cost for the entire Yale National Initiative is 63.8 million dollars. A detailed break-down of that figure is included in the document prepared by the Institute: "Strengthening Teaching in America's Schools: A Proposal to Replicate Nationally the Successes of the Yale-New Haven Teachers Institute."

CONCLUSION

Having celebrated its 25th anniversary the year before, during 2003 the Yale-New Haven Teachers Institute worked to consolidate progress in its two complementary areas of activity: the local and the national.

In New Haven it conducted a program of five seminars for Fellows, half of whom participated for the first time, as did three of the five professors serving as seminar leaders. It continued its work with the Centers for Professional and Curricular Development in the schools. It developed further the relationship of its resources to school curricula. It extended a concentrated effort to draw in and support teachers new to the district, several of whom were by the end of the year acting as their schools' Institute Representatives even while in their first or second years of teaching. In his first full year in a newly created position, the Associate Director solidified his and the Institute's role in supporting New Haven's efforts to recruit, develop and retain well-qualified teachers.

During 2003, the Institute's work on the national level was notably assisted by an extension of the support for the National Demonstration Project by the Wallace Foundation and a grant for 2002-2003 by the Jessie Ball duPont Fund. This support enabled the two-year Preparation Phase of the Yale National Initiative to be brought to completion. The Preparation Phase included Research and Planning Grants for the Pittsburgh Teachers Institute and the Houston Teachers Institute, which have significantly contributed to the evaluation of the Teachers Institute approach. The Preparation Phase enabled the Yale-New Haven Teachers Institute to collate and analyze data from the questionnaires and surveys conducted during the National Demonstration Project, establish a Web site for the Yale National Initiative, and prepare the "Understandings" and "Necessary Procedures" that serve as basis for membership in a new League of Teachers Institutes. Finally, the Preparation Phase made possible a summary evaluation of the National Demonstration Project by Rogers Smith and other researchers at the University of Pennsylvania.

The Institute looks forward to maintaining its local vigor and extending its national influence as a proven model of high-quality professional development for teachers. The Institute is seeking funds to continue the Yale National Initiative, which aspires to establish as many as 45 new Teachers Institutes in states across the nation.

The Institute looks forward to maintaining its local vigor and extending its national influence as a proven model of high-quality professional development for teachers.

APPENDIX

Committees, Councils, and Boards of the Institute

National Advisory Committee

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I. Michael Heyman
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James G. Speth
Deborah G. Thomas
Gerald E. Thomas
C. Megan Urry
Werner P. Wolf
Robert J. Wyman
Karen Wynn
Michael E. Zeller
Kurt W. Zilm

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Carolyn N. Kinder
Pedro Mendia-Landa
Jean E. Sutherland

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Elsa M. Calderón
Kristin Carolla
Jennifer Chisholm
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Christine A. Elmore
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Sandra K. Friday
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Gail G. Hall
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Jennifer Kuzmickas
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Joseph Raffone
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ACKNOWLEDGEMENTS

Numerous individuals and foundations have made gifts and grants to the Endowment Fund for the Yale-New Haven Teachers Institute. The 2003 Institute programs were supported in part also by grants from the Howard Hughes Medical Institute, the Jessie Ball duPont Fund, and the Sherman Fairchild Foundation. The New Haven Public Schools, Yale's partner in the Institute, has supported the Institute's program in New Haven continuously since its inception.