DOE/ER/75609--T2

FINAL REPORT FROM
THE FOUNDATION FOR ADVANCEMENTS IN SCIENCE AND EDUCATION
TO
UNITED STATES DEPARTMENT OF ENERGY
GRANT AWARD NO. DE-FG05-91ER75609
FUTURES with Jaime Escalante

Instructional Television Series for Secondary School Math and Science

The United States Department of Energy awarded the Foundation for Advancements in Science and Education (FASE) \$826,000 as support to produce the second set of *FUTURES* segments consisting of 12, 15-minute programs. The programs provide motivation for students to study math by connecting math to the work place and real-life problem scenarios. The programs are broadcast in 50 states through PBS Elementary and Secondary Service (E/SS). The grant term ended on December 16, 1993 and this final report documents program and financial activity results.

The 12 episodes are titled: Animal Care, Meteorology, Mass Communication, Advanced Energy, Oceanography, Graphic Design, Future Habitats, Environmental Science & Technology, Fitness & Physical Performance, Interpersonal Communications, Advanced Transportation and Product Design (Appendix A). Each program addresses as many as ten careers or job types within the broader field named. Minority and gender-balanced role models appear throughout the programs.

The program results have exceeded all expectations. In addition to winning more than 47 educational and media awards including the George Foster Peabody, ACT, and Environmental Media (Appendix B), the programs are now aired to the largest student audience of any math program in the history of instructional television (ITV). PBS reports that the program is the most widely distributed series of all time on ITV. On videocassette *FUTURES* has passed *The Civil War* among the most highly ordered of PBS's current titles. We estimate the *FUTURES* program now reaches a potential audience of over 15 million students (Appendix

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C). Videodisk distribution of the series in conjunction with a new series of middle school math problems on six double-sided disks was released as *Interactions Real Math - Real Careers* at the April 1994 NCTM National Conference. This makes *FUTURES* even more accessible to teachers by integration into computers, use of bar-code references on all the math problems and technical career footage (Appendix D).

The interest in and impact of the series which was first released in 1990 appears to be growing rather than declining as we enter 1994. The anticipated life of the series was first estimated at 3-5 years and we have revised that estimate to 7-10 years of active use.

Extensive evaluation of the program has been conducted both informally and formally over the past three years. Surveys, teacher reports and focus groups showed consistently positive reactions to the programs from student viewers, teachers and administrators (Appendix E). Moreover, independent evaluation conducted by Research Communications, Ltd. of Boston demonstrate that the series was effective in motivating students to study math and science and create interest among children in preparing for technical careers. These results were particularly marked among both African-American and Hispanic students (Appendix F).

FASE has been active in disseminating the series, its award-winning study guides and teacher support materials and working with underserved populations to ensure that they enjoy the full benefits of the series.

The series has been featured at hundreds of workshops, institutes, national meetings and in-services. Special one-day workshops were independently sponsored in seven cities throughout the nation on *FUTURES* for teachers and counselors. FASE's outreach efforts have resulted in over 160 national and regional groups using the series for the benefit of their membership (Appendix G).

We have received thousands of letters, calls and cards from teachers and students who have attended these workshops or have viewed these programs.

A small sample of some very recently conducted workshops using *FUTURES* follows:

- Crenshaw High School in South Central Los Angeles -- 55 inner-city math teachers and administrators participated.

- U.S. Department of Energy in Baton Rouge, LA -- series of workshops to bring innovative education programs to the Historically Black Colleges and Universities in Louisiana.
- FASE conducted several hands-on workshops in collaboration with The United States Space Foundation and the Access Center at California State University in Los Angeles by training teachers from inner-city schools.
- A new workshop with the National Council of La Raza will educate community parent educators in a workshop called "Tools for the Trade Building Parental Support for Math, Science and Reading."
- The Texaco Teacher institutes (TTI), now being run at 20 different public television stations for local science teachers, feature *FUTURES* as the basis of one of their workshops on how to use technology in the classroom.
- FASE recently participated in one of these institutes at DCTS/Channel 9 in Seattle, Washington to approximately 100 local educators. FASE also presented *FUTURES* at the January, 1994, TTI in Carbondale, Illinois, WSIU/Channel 8, to many local teachers.

FASE has been invited to present a proposal to a Texas-based foundation to adapt *FUTURES* into a multimedia science museum interactive display for children. The projected result of such an adaptation would be a software product that could be used in museums around the country. FASE has also developed an approach to adapting *FUTURES* for interactive career kiosks to be used at employment centers, job retraining centers, community colleges and other labor facilities that will appeal to, and educate, an older workforce audience into the career paths available and the training needed to succeed at technical jobs.

Another factor in the successful dissemination of the series has been the FASE orchestrated campaign involving scores of positive reviews, critiques, features and other articles appearing in technical and specialty media, as well as the lay press. For example, articles have appeared about *FUTURES* in such publications as the San Diego Union and "Hispanic Link", "Winds of Change", "Black Engineer", "Hispanic Engineer", the American Society for Engineering Education's 'prism', 'the CETA Newsletter', TECHNOS, the United Unions Job Corps Training Programs "Achiever", "QUANTUM", "PTA Today", "Electronic Learning", The

Sacramento Bee, TIME Magazine, NEWSWEEK Magazine, USA TODAY and many others (Appendix H).

The attached cost report details the expenditure of all United States Department of Energy funds. This has been audited by the independent auditing firm of Coopers and Lybrand. Both an audited financial statement and A133 Audit for FASE have been enclosed for your files as well as an annual report brochure (Appendix I).

We hope that this summary report, which for practical purposes can not possibly detail all the successes that this grant produced, communicates the impact *FUTURES* has had on the national educational landscape.

We know that without the support of the United States Department of Energy that the series would not have become a reality and we would like to extend our thanks and appreciation to Rich Stephens, John Ortman and Angela Hart.

Very truly yours,

A handwritten signature in cursive script, reading "Jack Dirmann". The signature is written in dark ink and is positioned below the phrase "Very truly yours,". A horizontal line is drawn across the signature.

Jack Dirmann

Associate Director

A Summary of Results and Achievements
from projects sponsored by the
U.S. Department of Energy
and produced by the Foundation for
Advancements in Science and Education

*Science Education Directors' Meeting
December 12-15, 1993
Berkeley, California*

Introduction

The partnership between the U.S. Department of Energy and the Foundation for Advancements in Science and Education (FASE) has resulted in a series of unique and effective tools for math and science education.

FASE/DOE in-classroom programming is now estimated to reach as many as 15 million students in 48 states. An additional seven million parents, students and teachers have been reached through prime time specials broadcast on PBS. These figures represent broadcast only; in addition, nearly 40,000 videocassettes have been distributed to schools, parents and teachers in the U.S. and abroad.

To date, these productions have been honored with more than 60 major awards from television and film festivals, professional organizations and educational technology associations, including the George Foster Peabody Broadcasting Award and the Action for Children's Television (ACT) Award.

FASE outreach works actively with more than 160 teacher associations, minority education programs, parent groups, and professional organizations to ensure that FASE/DOE video materials and viewer guides are well-utilized.

Increasingly, educators rely on these products to motivate student interest and to help them align their classroom presentations to current teaching standards.

The following is a brief overview of the results of work to date, as well as an introduction to the newest FASE/DOE projects.

We take great pride in these accomplishments, and look forward to our continued partnership in providing innovative educational programs to our schools.

FUTURES: Breaking new ground

FUTURES was created as a tool for secondary teachers, to fulfill their request for materials that motivate interest in mathematics.

The series brings the workplace to the classroom, introducing students to the range of careers open to those with math skills. Among the worksites featured are DOE's Sandia, Brookhaven, and National Renewable Energy labs.

According to PBS reports, *FUTURES* is the most widely used in-classroom program it has ever offered. FASE, PBS, and Jaime Escalante have received thousands of phone calls, letters, and other personal communications from individuals throughout the country, expressing appreciation for *FUTURES*.

Independent evaluations of *FUTURES* have confirmed its positive effects on student attitudes toward math and math-related careers, finding the series to be particularly effective with minority students.

Among the findings:

- Among African-American students, interest in a career in engineering went from 29% to 58%.
- Among Hispanic students, interest in a career in architecture rose from 28% to 65%.

- *FUTURES* users are significantly more aware of how classroom math is related to future jobs than non-users.
- Teachers state that *FUTURES* enhances their math programs and motivates their students; 75% reported positive attitude changes following *FUTURES* use.
- Among students surveyed, 96% would recommend *FUTURES* to their friends. In addition, 96% expressed a desire to see additional episodes themselves.
- According to 88% of the teachers independently surveyed, *FUTURES* is better than other educational programs.
- Both African-American students (70%) and Hispanic students (79%) stated that *FUTURES* is better than other programs seen at school.
- Both students and teachers find *FUTURES* visually exciting and informative.

The Value of DOE-sponsored Video: The Educator's Perspective

Today it is widely recognized that graduates of American high schools have a standard of mathematics that is alarmingly below that of students from other industrialized and some developing countries...[FUTURES] is the first effective work that I have seen that addresses this most critical national problem.

**AMAR G. BOSE, PROFESSOR,
ELECTRICAL ENGINEERING AND COMPUTER SCIENCE, MIT**

FUTURES is a gift from Jaime Escalante and PBS that's bound to inspire the vid-kid generation to go in hot pursuit of math and science careers.

KEITH GEIGER, PRESIDENT, NATIONAL EDUCATION ASSOCIATION

FUTURES is truly an exciting and worthwhile undertaking...The need for students to be trained in mathematics and science becomes more apparent every day...Certainly FUTURES and AP can work together to directly address such a critical need.

**PHILIP ARBOLINO, ASSOCIATE DIRECTOR,
THE COLLEGE BOARD ADVANCED PLACEMENT PROGRAM**

FUTURES presents an exceptional approach to helping students build pride and respect in their families and themselves. I commend those currently using Mr. Escalante's methods and urge others who are committed to strengthening Latino students' self-esteem and cultural pride to step forward and take notice of FUTURES and to bring the series into their classrooms and youth programs.

**MARINE DOMINQUEZ, PRESIDENT,
LEAGUE OF UNITED LATIN AMERICAN CITIZENS**

I have shown these tapes to a wide variety of classes—from honors algebra to remedial math. Practically without exception, students watch without having to be coerced and seem quite enthused with the message. These tapes are extremely well done and are money well spent.

**CYNTHIA LANIUS, DIRECTOR,
MILBY HIGH SCHOOL/RICE UNIVERSITY MATHEMATICS PROJECT**

Conferences and Special Events

FASE outreach efforts for DOE-sponsored educational programming are extensive. Each year, FASE staff reach hundreds of thousands of educators at conferences, workshops, and other special events. The following list, though not complete, gives an idea of the scale of hands-on outreach activity:

CALIFORNIA MESA SCREENING - CULVER CITY
CHICAGO HIGH SCHOOL CHAIRMAN'S AWARD HISPANIC ENGINEER OF THE YEAR AWARDS
AMERICAN CORRECTIONAL ASSOCIATION CONFERENCE
COOPERATING HAMPTON ROADS FOR MINORITIES IN ENGINEERING
CIMMERON HIGH SCHOOL WORKSHOP
KOCE FUTURES WORKSHOP
NATIONAL ASSOCIATION OF MINORITY ENGINEERING
PROGRAMMING ADMINISTRATORS CONFERENCE
U.S. BLACK ENGINEERS
FAMILY 2000 CONFERENCE & FUTURES WORKSHOP
MATHEMATICS 2000 MEETING
NATIONAL SCIENCE TEACHERS' ASSOC.
NATIONAL COUNCIL OF SUPERVISORS OF MATHEMATICS MEETING
NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS NATIONAL CONFERENCE
CHALLENGER CENTER
SOAR/NSTA SCREENING
CALIFORNIA SCIENCE PROJECT-USC/LAUSD
FUTURES WORKSHOP
NATIONAL PTA CORRECTIONAL EDUCATIONAL ASSOCIATION NATIONAL COUNCIL OF LA RAZA CONFERENCE
HENAAC - SCREENING
UNIVERSITY OF NEW MEXICO
PROJECT XL CONFERENCE
AMERICAN INDIAN SCIENCE & ENGINEERING SOCIETY (AISES) CONFERENCE
NATIONAL MIDDLE SCHOOL ASSOCIATION CONFERENCE
WGTE-TOLEDO, OH
EUROPEAN COUNCIL OF TEACHERS OF MATH
NATIONAL INDIAN EDUCATION ASSOCIATION CONFERENCE
NATIONAL INDIAN EDUCATION ASSOCIATION CALIFORNIA MEDIA LIBRARY EDUCATION ASSOCIATION AMERICAN VOCATIONAL ASSOCIATION CONFERENCE
SOCIETY FOR THE ADVANCEMENTS OF CHICANOS AND
NATIVE AMERICANS IN SCIENCE
AMERICAN METEOROLOGICAL SOCIETY
OPPORTUNITIES FOR LOUISIANA
LOS ANGELES COUNTY TEACHERS OF MATHEMATICS NATIONAL TECH PREP CONFERENCE
NATIONAL ACTION COUNCIL FOR MINORITIES IN ENGINEERING
INSTRUCTIONAL TELEVISION (ITV)
UTILIZATION CONFERENCE
ITV UTILIZATION FUTURES WORKSHOP
"REACHING FOR THE STARS" WORKSHOP - CAL STATE L.A.
CRENSHAW HIGH SCHOOL FUTURES WORKSHOP
CONFERENCE FOR THE ADVANCEMENT OF MATHEMATICS TEACHERS
CALIFORNIA SCIENCE TEACHER'S ASSOCIATION CONFERENCE
CALIFORNIA SCIENCE TEACHER'S ASSOCIATION
MOD TECH CONSORTIUM
"GETTING COMFORTABLE TEACHING SPACE" WORKSHOPS:
NIMITZ MIDDLE SCHOOL

DREW MIDDLE SCHOOL
SAN FERNANDO HIGH
MORNINGSIDE HIGH SCHOOL
CALIFORNIA MATH COUNCIL CALIFORNIA MATH COUNCIL FUTURES & INTERACTIONS WORKSHOP
SANDIA NATIONAL LABORATORIES
NATIONAL SPACE SOCIETY/WESTERN CHAPTER CONFERENCE ON EDUCATION
TEXACO TEACHER TRAINING INSTITUTE I
PBS 25TH ANNUAL CONFERENCE
PBS/LBJ SYMPOSIUM
CARVER HIGH SCHOOL URBAN SYSTEMIC INITIATIVE CONFERENCE
UNIVERSITY OF TEXAS, EL PASO
AMERICAN ASSOCIATION FOR ADVANCEMENTS IN SCIENCE
ROSEVILLE SCHOOL DISTRICT
QUALITY EDUCATION FOR MINORITIES
DEPT OF ENERGY
EDUCATION DIRS MEETING
GEORGETOWN UNIVERSITY
AMERICAN ASSOCIATION OF SCHOOLS
MOUNTAIN VIEW
ASEE
CALIFORNIA SOCIETY OF PROFESSIONAL ENGINEERS LATINO CHAMBER OF COMMERCE
MONROVIA BOARD OF EDUCATION
COLORADO STATE UNIVERSITY
EAST LOS ANGELES ROTARY
UC DAVIS
CAL POLY, POMONA
WEST VIRGINIA DEPARTMENT OF EDUCATION
NASA
AMERICAN ASSOCIATION OF ENGINEERING SOCIETIES AP PROGRAM, TX
CAMARILLO COLLEGE
TEXAS SCHOOL BOARD
DEPT. OF DEFENSE SCHOOLS, KOREA
ROGER WILLIAMS COLLEGE, UNIVERSITY OF MASSACHUSETTS
ILLINOIS COLLEGE OF DUPAGE
MICHIGAN STATE UNIVERSITY
AP PROGRAM - DEPARTMENT OF DEFENSE
JAPAN/KINAWA
MARICOPA COMMUNITY COLLEGE, PHOENIX, AZ
ANGELO STATE UNIVERSITY
BOISE STATE UNIVERSITY
WILLIAM PATTERSON COLLEGE
NORTHERN MICHIGAN UNIVERSITY
CONFERENCE
EASTERN MICHIGAN UNIVERSITY
CONFERENCE
UMCA GOOD FRIDAY BREAKFAST
WHITE HOUSE CONFERENCE ON EDUCATION
INTER-FAITH COUNCIL
UNIVERSITY OF NORTHERN COLORADO
COLLEGE OF ST. THOMAS
MATHCOUNTS, AUSTIN, TX
CORNELL UNIVERSITY, SOCIETY OF HISPANIC PROFESSIONAL ENGINEERS
GOVERNMENT TECHNOLOGY EDUCATION EVENT, AUSTIN
OHIO TECH WORKSHOP
KCET SCREENING
HISPANIC FORUM
U.S. BLACK ENGINEERS
LOS ANGELES MATH TEACHERS ASSOCIATION
CALIFORNIA MATHCOUNTS

PUBLIC LIBRARY ASSOCIATION
TEACHERS OF SECOND LANGUAGES
AMERICAN ASSOC OF COUNSELING & DEVELOPMENT
NATIONAL ACTION COUNCIL FOR MINORITIES IN ENGINEERING
UNIVERSITY OF MASSACHUSETTS
CALIFORNIA ASSOC OF COUNSELING & DEVELOPMENT
NATIONAL EDUCATION ASSOCIATION
ACHIEVEMENT COUNCIL
SUPERINTENDENCY INSTITUTE
CALIFORNIA SCIENCE PROJECT
AMERICAN INDIAN SCIENCE & ENGINEERING SOCIETY, CALIFORNIA MEDIA LIBRARIANS
CALIFORNIA GRAPE GROWERS
ST. BOSCO AWARD OF EXCELLENCE
NOGALES HIGH SCHOOL
WICHITA STATE UNIVERSITY NATIONAL SCHOOL PUBLIC RELATIONS ASSOCIATION
OCCUPATIONAL EDUCATION SYSTEM, FORT COLLINS, CO
KINGS DAUGHTER MEDICAL CENTER
NATIONAL SPEAKERS' FORUM
HAMPTON COMMUNITY COLLEGE
NATIONAL EDUCATION CONF
FIRSTVIEW
TECHVIEW
AT&T DENVER:
"KIDS PLACE"
SEATTLE, WA
CALIFORNIA SCHOOL CONFERENCE, PASADENA
PUBLIC ADVOCATES, SF LIBRARY AWARD
SPEAKERS GUILD
1990 AMERICAN EDUCATION AWARD
DELAWARE AWARD
JUNIOR ACHIEVEMENT LEADERSHIP CONFERENCE
NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS
WHITE HOUSE CONFERENCE ON EDUCATION
YELLOWHEAD TRIBAL COUNCIL, CANADA
GTW/PROMISE OF EDUCATION
NAMAC
CAL STATE NATIONAL ALUMNI AWARD
CONCORDIA UNIVERSITY TELACU
PRESIDENTIAL FREEDOM AWARD, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE
NATIONAL EDUCATION ASSOCIATION
AAHE SPEECH
WOODBURY UNIVERSITY ROUND TABLE
BOLIVIAN TEACHERS
LOS ANGELES EDUCATION PARTNERSHIP AWARDS
LEAVEY AWARDS
READER'S DIGEST SPEECH
GMI GRADUATION-FLINT, MICHIGAN
LEAGUE OF UNITED LATIN AMERICAN CITIZENS
FISHER AWARD
MASONIC AMERICANISM AWARD
PBS PRESS TOURS
ELAC LEADERSHIP CONFERENCE
HISPANIC ENGINEERS NATIONAL ASSOCIATION AWARDS
LA EDUCATIONAL PARTNERSHIP WORKSHOP

Higher Education

Though it was designed for middle and high school students, hundreds of institutes of higher education are using *FUTURES*. A partial list:

NORTH CAROLINA
STATE UNIVERSITY
UNIVERSITY OF WISCONSIN, STOUT
UNIVERSITY OF ILLINOIS, CHAMPAIGN
TRINIDAD STATE JUNIOR COLLEGE
UNIVERSITY OF COLORADO
AT BOULDER
UNIVERSITY OF CINCINNATI
NEW MEXICO STATE UNIVERSITY
UNIVERSITY OF ARKANSAS
UNIVERSITY OF MISSOURI AT ROLLA
SOUTHEAST MISSOURI STATE
UNIVERSITY
CAL STATE FRESNO
UNIVERSITY OF
SOUTHERN MISSISSIPPI
STATE UNIVERSITY OF NEW YORK
(SUNY) BROCKPORT
U.C. SANTA BARBARA
CLEMSON UNIVERSITY
UNIVERSITY OF ILLINOIS AT CHICAGO
UNIVERSITY OF WISCONSIN
AT MADISON
LEHIGH COUNTY
COMMUNITY COLLEGE
CALIFORNIA POLYTECHNIC
WABASH VALLEY COLLEGE
ADAMS STATE COLLEGE
BURLINGTON COUNTY COLLEGE
WASHINGTON STATE UNIVERSITY
UNIVERSITY OF NORTH ALABAMA
BRIGHAM YOUNG UNIVERSITY
GWYNEDD MERCY COLLEGE
ST. LOUIS COMMUNITY COLLEGE
BLACKHAWK COLLEGE
UNIVERSITY OF TEXAS AT EL PASO
CALIFORNIA STATE UNIVERSITY
SAN MARCOS
DREXEL UNIVERSITY
ELIZABETHTOWN COMMUNITY
COLLEGE
MARIAN COLLEGE
TUFTS UNIVERSITY
UNIVERSITY OF TENNESSEE
AT MARTIN
MESSIAH COLLEGE
OHIO STATE UNIVERSITY, COLUMBUS
MINTO STATE
COLUMBIA UNIVERSITY
KEAN COLLEGE OF NEW JERSEY
REINHARDT COLLEGE
VALDOSTA STATE COLLEGE
AUSTIN COMMUNITY COLLEGE
HOOD COLLEGE
GOVERNORS STATE UNIVERSITY
MEREDITH COLLEGE
MARICOPA COUNTY
COMMUNITY COLLEGE
FAIRMONT STATE COLLEGE
UNIVERSITY OF ST. THOMAS
UNIVERSITY OF SOUTH CAROLINA
SPARTANBERG
DEPAUL UNIVERSITY
MERCY COLLEGE
SAN JOSE STATE UNIVERSITY
QUEENSBOROUGH
COMMUNITY COLLEGE
NEW YORK CITY

TECHNICAL COLLEGE
LONG ISLAND UNIVERSITY
STEPHENS COLLEGE
UNIVERSITY OF ARIZONA
CLEMSON UNIVERSITY
BARTON COLLEGE
OLIVET NAZARENE UNIVERSITY
NAVAJO COMMUNITY COLLEGE
MIDDLE TENNESSEE STATE
COMMUNITY COLLEGE OF
PHILADELPHIA
COMMUNITY COLLEGE OF
ALLEGHENY
AMERICAN MUSEUM
OF NATURAL HISTORY
OREGON STATE UNIVERSITY
UNIVERSITY OF MICHIGAN
UNIVERSITY OF LOWELL
D-Q UNIVERSITY
GRAMBLING STATE UNIVERSITY
KENT STATE UNIVERSITY
LA SIERRA UNIVERSITY
ART INSTITUTE OF ATLANTA
CUMBERLAND COLLEGE
ROOSEVELT UNIVERSITY
CROSTHERVILLE
COMMUNITY COLLEGE
LORAS COLLEGE
VIRGINIA POLYTECHNIC INSTITUTE
MASSACHUSETTS INSTITUTE OF
TECHNOLOGY
MEDICAL UNIVERSITY OF SOUTH
CAROLINA
APPALACHIAN STATE UNIVERSITY
SOUTHWEST TEXAS STATE
UNIVERSITY
FAIRMONT STATE COLLEGE
RENSSELAER POLYTECHNIC
INSTITUTE
GAINESVILLE COLLEGE
NORTHERN ARIZONA UNIVERSITY
TENNESSEE STATE UNIVERSITY
TEMPLE JUNIOR COLLEGE
KEENE STATE UNIVERSITY
ARIZONA STATE UNIVERSITY
UNIVERSITY OF MIAMI
ALBANY STATE UNIVERSITY
NORTHWEST ALABAMA
COMMUNITY COLLEGE
LOUISIANA STATE UNIVERSITY
UNIVERSITY OF VERMONT
IOWA STATE UNIVERSITY
PENN STATE UNIVERSITY
ARIZONA WESTERN COLLEGE
UNIVERSITY OF NORTH CAROLINA
LOUISIANA TECH UNIVERSITY
CONCORDIA UNIVERSITY
UNIVERSITY OF NEVADA
UNIVERSITY OF SOUTHERN
CALIFORNIA
SALEM COMMUNITY COLLEGE
XAVIER UNIVERSITY OF LOUISIANA
BETHEL COLLEGE
ROANE STATE COMMUNITY COLLEGE
UNIVERSITY OF ILLINOIS, CHICAGO
UNIVERSITY OF CENTRAL FLORIDA
UNIVERSITY OF SOUTH
FLORIDA, TAMPA

SOUTHWEST STATE UNIVERSITY
NEW MEXICO STATE UNIVERSITY
UNIVERSITY OF FLORIDA
UTAH STATE UNIVERSITY
ARIZONA WESTERN COLLEGE
UNIVERSITY OF TENNESSEE,
KNOXVILLE
CAL STATE L.A.
COLLEGE OF DUPAGE
STATE UNIVERSITY OF NEW YORK,
BUFFALO
PURDUE UNIVERSITY
INDIAN HILLS COMMUNITY COLLEGE
UNIVERSITY OF CALIFORNIA,
SANTA CRUZ
HOWARD UNIVERSITY
GATEWAY COMMUNITY COLLEGE
SANGAMON STATE UNIVERSITY
KUTZTOWN UNIVERSITY
SAMPSON COMMUNITY COLLEGE
GASTON COLLEGE
COLUMBIA BASIN COLLEGE
MICHIGAN STATE UNIVERSITY
NORTHERN KENTUCKY UNIVERSITY
CANADA COLLEGE
LONGWOOD COLLEGE
VALDOSTA STATE COLLEGE
UNIVERSITY OF IDAHO
UNIVERSITY OF NEBRASKA
ST. MARTIN'S COLLEGE
KEAN COLLEGE OF NEW JERSEY
CAL STATE UNIV SACRAMENTO
CENTRAL ALABAMA
COMMUNITY COLLEGE
FISHER COLLEGE
VANDERBILT UNIVERSITY
HARTNELL COLLEGE
CORNELL UNIVERSITY
FRESNO CITY COLLEGE
UNIVERSITY OF HAWAII, HONOLULU
CLEVELAND STATE UNIVERSITY
DEKALB COLLEGE
UNIVERSITY OF TOLEDO
UNIVERSITY OF ARKANSAS
UNIVERSITY OF WYOMING
ITHACA COLLEGE
ILLINOIS STATE UNIVERSITY
UNIVERSITY OF SOUTH CAROLINA
CAL STATE UNIV NORTHRIDGE
UNIV OF PITTSBURGH
TAYLOR UNIVERSITY
COLUMBUS COLLEGE
GLASSBORO STATE COLLEGE
UNIVERSITY OF TEXAS EL PASO
HOFSTRA UNIVERSITY
TEXAS A&M UNIVERSITY
CHRISTIAN BROTHERS UNIVERSITY
SAGINAW VALLEY STATE
UNIVERSITY
FLORIDA INSTITUTE OF TECHNOLOGY
JOHNS HOPKINS UNIVERSITY
SOUTHERN UTAH UNIVERSITY
SOUTH DAKOTA STATE UNIVERSITY
UNIVERSITY OF MAINE
CHICAGO STATE UNIVERSITY
STATE UNIVERSITY OF NEW YORK
AT OSWEGO
UNIVERSITY OF PUERTO RICO

Awards

FUTURES and the prime time specials *Living and Working in Space: The Countdown Has Begun* and *Math...Who Needs It?!* have been widely honored for effectively bringing home the real-life and workplace uses of math. To date, these productions have received more than 60 major awards from television and film festivals, professional organizations, and educational technology associations.

**HENRY W. GRADY
COLLEGE OF JOURNALISM
THE UNIVERSITY OF GEORGIA**
*George Foster Peabody Broadcasting
Award*

ENVIRONMENTAL MEDIA ASSOCIATION
Environmental Media Award

ACTION FOR CHILDREN'S TELEVISION
ACT Award

**NATIONAL EDUCATION
FILM & VIDEO FESTIVAL**
Four Awards, including the Golden Apple

**COLUMBUS INTERNATIONAL
FILM & VIDEO FESTIVAL**
Five awards, including two CHRIS Awards

**CHILDREN'S TELEVISION
INTERNATIONAL**
School Television Hall of Fame

**COUNCIL ON INTERNATIONAL
NONTHEATRICAL EVENTS**
Six CINE Golden Eagles

**ASSOCIATION OF EDUCATIONAL
COMMUNICATIONS TECHNOLOGY**
The CRYSTAL Award

**BIRMINGHAM INTERNATIONAL
EDUCATIONAL FILM FESTIVAL**
*Three Awards, including Category Winner,
Teacher and Career Education*

**ASSOCIATION OF VISUAL
COMMUNICATORS**
Fourteen CINDY Awards

**CHICAGO INTERNATIONAL FILM
FESTIVAL**
Three Awards

**WORLDVEST/HOUSTON INTERNATIONAL
FILM & VIDEO FESTIVAL**
*Six Awards, including
Gold Special Jury Award*

NEW YORK FILM FESTIVAL
Two Awards, including the Bronze Medal

**CALIFORNIA SOCIETY OF
PROFESSIONAL ENGINEERS**
*Special Award for advancement of
interest among youth in mathematics and
science.*

AMERICAN FILM & VIDEO FESTIVAL
*Eight Awards, including several First Place
Ribbons*

SAN JOSE FILM AND VIDEO COMMISSION
Two Awards, including the JOEY

FUTURES Wins Environmental Media Award

The DOE-sponsored series FUTURES with Jaime Escalante was the winner in the Children's Programming/Live Action Category at the Third Annual Environmental Media Awards. The awards ceremony, held at Fox Studios in West Los Angeles, was followed with an address by Vice President Al Gore.

The awards were created by the Environmental Media Association (EMA) "to honor exemplary television, film, and music video entertainment productions which deal responsibly and effectively with environmental themes."

Only eight productions received awards this year. Winners included ABC, CBS, Turner Broadcasting, HBO, Hollywood Pictures, and FASE.

Jaime Escalante's guests on the *Environmental Science and Technology* episode of the popular PBS series include Olivia Newton-John and Michael Prairie, Mollie Thompson and Larry Yellowhorse of the DOE's Sandia Lab.

EMA is a non-profit organization offering environmental information and expertise to the entertainment community. Its board of directors includes prominent industry activists such as Robert Redford, Norman Lear, Jane Fonda, and Ted Danson, as well as television and motion picture executives.

Executive Producer Steve Heard accepted the award for FASE following the screening of a short clip from FUTURES. "I think it's an encouraging sign that one of our most popular programs ever is about using mathematics to solve environmental problems," he told attendees.

In addition to the EMA honor, this episode has received the CINE Golden Eagle from the Council on International Theatrical Events and a silver Cindy Award from the Association of Visual Communicators. To date, FASE's educational video productions have received more than 60 awards from television and film festivals, professional organizations and educational technology associations.

Reaching Parents and Community Groups

In addition to reaching students in the classroom, the FASE/DOE partnership has had a substantial impact on parents and community groups. *Math...Who Needs It?!*, first aired on PBS stations nationally in September, 1991. The premier broadcast captured a large audience and earned high praise from reviewers, students, parents and teachers, prompting repeat broadcasts at PBS affiliates as well as a second national broadcast during back-to-school week in 1992.

Comedy, inspiring scenes from Jaime Escalante's classroom and interviews with people who hold exciting math-oriented jobs combine to challenge parents, grandparents, and students to reconsider the view that math is dull and unnecessary for most careers.

More than 2,000 letters and hundreds of phone calls expressing enthusiasm and appreciation for the program were received within months of its premiere.

The popularity of *Math...Who Needs It?!* has remained strong. In addition to home and classroom viewing, it has been adopted for a variety of educational uses. Some examples:

- ❑ At the Science and Technology Interactive Center in Aurora, Illinois, a hands-on science center for children, *Math...Who Needs It?!* is used in the "Sci Tech Clubs for Girls", a program designed to help girls become comfortable with math and science.
- ❑ The Foundation on Employment & Disability, Inc. uses *Math...Who Needs It?!* in its programs for high school students with disabilities. In Project YES, a month-long residential program in marine and general biology the group operates in conjunction with the UCLA department of Microbiology, groups of high school students view *Math...Who Needs It?!* , then discuss potential careers.

- ❑ The Girl Scouts Center of Greater New York uses *Math...Who Needs It?!* in their college preparatory program. About 400 young people are enrolled in these programs each year.
- ❑ On the exhibit floor in the demonstration theater at the Science Museum of Virginia, *Math...Who Needs It?!* runs continuously, part of a series of videos of various topics related to education.
- ❑ More than two years after the initial release of *Math...Who Needs It?!*, FASE received a call from a Superior Court Judge of the District of Columbia, who wanted copies of the show to inspire young people in the juvenile division of his court with the hope that they can get their lives on an upward track.

In March 1993, FASE and DOE presented a second educational program for family viewing—*Living and Working in Space: The Countdown Has Begun*, a unique look at career opportunities of the near future.

Prior to the special's prime time broadcast on PBS, dozens of professional and student groups learned of the program and initiated activities related to it. Among these were the National Space Society, the American Institute of Aeronautics and Astronautics, the United Nations, the National Council of Teachers of Mathematics, the National Education Association.

Teachers and professional groups, including the U.S. Department of the Interior, the U.S. Black Engineers, the National Science Teachers Association, Princeton's Space Studies Institute and the U.S. Space and Rocket Center, continue to use the special as a thought-provoking, entertaining and inspiring look at the future.

Some of the many ways the special has been used for informal education:

- ❑ *Living and Working in Space: The Countdown Has Begun* became the subject of a magazine article and contest which required students to watch the show and then write about one of the careers mentioned.
- ❑ WHRO, a PBS affiliate in Norfolk, Virginia, produced a half-hour panel discussion follow-up immediately after the airing of *Living and Working in Space: The Countdown Has Begun*. Panelists discussed the show and the position Virginia takes regarding math and science education and opportunities for the future.
- ❑ In South Plainfield, New Jersey, *Living and Working in Space: The Countdown Has Begun* was used by Plainfield High students in an extracurricular program. They performed a skit in which they acted out living conditions during a twenty-four hour period aboard a space station. With the help of the video, students were able to achieve a perfect score in all three areas being judged.
- ❑ The chairman of the education department at the Department of Defense uses an edited version of *Living and Working in Space: The Countdown Has Begun* in his training program for new recruits.
- ❑ The United States Space Foundation put on a series of workshops with the Access Center at California State University in Los Angeles for teachers from inner city schools designed to get teachers comfortable with teaching about space. FASE staff made presentations on *Living and Working in Space: The Countdown Has Begun*.
- ❑ U.S. AIR airline ran a seven-minute trailer of *Living and Working in Space: The Countdown Has Begun* during the entire month of March, 1993 on 5,000 flights carrying over 700,000 passengers.

Interactions

Real Math-Real Careers

Interactions is a multimedia mathematics product for middle school teachers. This FASE/DOE project will be released at the annual NCTM conference in April, 1994.

FUTURES has become the most popular in-classroom series distributed by PBS by helping students answer the most frequently-asked question about math: "When am I ever going to *use* this stuff?"

Interactions employs the best of current technology to take the next logical step—to *show students the real-world uses of specific middle school math concepts and engage them in reality-based problem solving exercises.*

Students go on-site with professionals—many of them women and minorities—working in fields ranging from endangered species protection to fashion, to discover the many uses of the math they are studying.

Interactions helps teachers connect math and the real world by providing context and purpose. Each episode involves students with a specific problem in a field, setting the stage for group or individual problem-solving activities related to the topics of the middle school curriculum.

■ A Tool for Teachers

Interactions was created as a tool for the teacher "in the trenches." All phases of product design have incorporated the expressed needs of classroom teachers.

Work on the project began with a nationwide survey of teacher attitudes regarding classroom technology. The survey found that most teachers are interested in new technologies and willing to incorporate them in their teaching.

Further surveys addressed what teachers would want from a multimedia math product. The most desired feature was the ability to *relate mathematics to life*.

A detailed *Interactions* prototype was presented at NCTM '93, to a group of current middle school math teachers. *Every* response from this group was positive.

A video demonstration was screened in August at the annual gathering of Instructional Television specialists from throughout the country. These individuals are very familiar with the current state of educational technology, and are decision makers regarding which products are available to classrooms. Over 80% had very positive responses; 63% felt that *Interactions* would be a "very effective" resource for teachers.

After additional prototype studies conducted with the Texas Conference for the Advancement of Mathematics Training and the California Math Council, an independent focus group study of *Interactions* was conducted involving 60 teachers around the country. The teachers found the materials highly interesting and highly effective in motivating students to study particular middle school math topics and in helping teachers to take a problem-solving approach to instruction.

Good Morning Miss Toliver

During Back-to-School Week 1993, FASE and DOE brought **Good Morning Miss Toliver** to PBS. The prime time special is an engaging behind-the-scenes look at Kay Toliver's classroom.

For over 26 years, Kay Toliver has made mathematics come alive for the students of East Harlem Tech/P.S. 72. She weaves history, literature, and art into the study of mathematics, encouraging students to learn by discovering.

"First Jaime Escalante did it in 'Stand and Deliver'," reported the Los Angeles *Times*. "Now **Good Morning Miss Toliver** shows how East Harlem teacher Kay Toliver gets her students inspired and motivated."

The special features candid interviews with Toliver and her students, and follows the class as they travel the "math trail," an expedition in which her students discover the wealth of math and history in their community.

Good Morning Miss Toliver is an inspiration to educators and parents, reaffirming the power of good teaching to change young lives.

What educators say...

Just wait until America witnesses what our beautiful, talented, and articulate children can accomplish when their teachers are knowledgeable, skilled, and hold them in high esteem. On behalf of the 100,000 members of the National Council of Teachers of Mathematics, I salute you, Kay Toliver, distinguished teacher. You make us proud.

—IRIS M. CARL, PAST PRESIDENT,
NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS

You and your students were absolutely fantastic in Good Morning, Miss Toliver. I have watched the tape several times and shared it with many of my friends and colleagues. It is unfortunate that the enthusiasm for mathematics exhibited by your students is the exception rather than the rule. Nevertheless, with your help and that of other outstanding teachers, we hope to make great strides toward making mathematics come alive and work for all students.

—J. ARTHUR JONES, DIRECTOR, OFFICE OF EQUITY AND DIVERSITY,
MATHEMATICAL SCIENCES EDUCATIONAL BOARD, NATIONAL RESEARCH
COUNCIL

In this production, you have found a way to inspire not only teachers, but students, parents, volunteers, and mentors....Our students today need to learn how to think, and this program will start them on that path if they are given a chance to see it.

—JOEL KATZ, EXECUTIVE DIRECTOR,
FLORIDA ALLIANCE FOR TECHNOLOGICAL EDUCATION

The program I recently watched about you deeply moved me. It was one of the most powerful and triumphant stories I have ever seen.

—RACHEL WORBY, CONDUCTOR, CARNEGIE HALL YOUTH CONCERTS,
FIRST LADY OF THE STATE OF WEST VIRGINIA

Ms. Toliver is a teachers' teacher. She knows how to reach inside the souls of the students and make them see that the power to succeed is within each of them. She is a role model the students can relate to. In a time when many of these young people

feel that society has labeled them as failures, Ms. Toliver's message comes through clearly as one of hope, discipline, and motivation.

—CATHY HESS WRIGHT, TEACHER,
CARVER HIGH SCHOOL, MONTGOMERY, AL

[Good Morning, Miss Toliver] is an energizing and empowering look at a special woman. It also presents a style and technique of teaching which can serve as a model for others.

—CAROLE LEVINE, PARENT INVOLVEMENT/EDUCATION SPECIALIST,
THE NATIONAL PTA

Congratulations for creating a strong, vibrant program that captures the excitement of education! Ms. Toliver's ability to make math into a lively, thought-provoking challenge for her eager class demonstrates how students, when engaged, will work hard to learn. This program is a must-see for anyone concerned about education.

—WILFRED O. EASTER, JR., EXECUTIVE DIRECTOR,
MATHEMATICS, ENGINEERING, SCIENCE ACHIEVEMENT (MESA)

I showed the video to two groups at the Learning Research Development Center (U. Pittsburgh), all felt it was an excellent show with good math for African and Hispanic students. They were particularly impressed with her ability to get students to express their ideas, to see comfort in the classroom, and the absence of chaos. The Math Trail idea was very impressive.

—ED McDONALD,
LEARNING RESEARCH DEVELOPMENT CENTER, UNIVERSITY OF PITTSBURGH

What viewers say...

I wish I had a math teacher, or any teacher, that made learning as fun and creative as you're able to do. With all the negative stories we read and hear about our education system and deterioration, it's refreshing to see a person of your character, charm, and caring ways inspire and motivate our young leaders of tomorrow.

—VIEWER, E. BRIDGEWATER, MA.

I started teaching in 1967 and (after 20 or so years in public schools) now teach pre-service teachers at Florida International University. Though my field is anything BUT math, I learned so much from you as I saw you today. I ordered the video cassette of the show and plan to have my students at FIU view it...and I shall say, 'Now this is a teacher. Learn from Kay Toliver.' Thank you for this truly inspirational experience.

—TEACHER, MIAMI, FL

I was so impressed. I was raised in the 60s, when girls were taught that they were not good in math. I don't want that to happen to my kids.

—VIEWER, NEW YORK

The show was brilliant. It really got at the heart of education. It was very insightful and well done. Ms. Toliver is a pure gift!

—VIEWER, BERKELEY, CA

The show was just terrific. It's one of the best illustrations of what teaching is all about!

—ART CONSULTANT AND AUTHOR, WASHINGTON, DC.

I enjoyed Good Morning Miss Toliver very much. I especially liked her innovative teaching style, which showed math interrelated to all parts of our lives.

—VIEWER, NEWARK, NY

The show was excellent—very, very good. It was highly motivational and gave dynamic examples of the characteristics of great teaching. I will use it in teacher training.

—SPECIAL EDUCATION PROFESSOR, STANTON, VA.

What the critics say...

For 32 years [sic], Kay Toliver, award winning teacher at East Harlem Tech, in New York City, has been surrounding her at-risk students with such passion for ideas and love of learning that they have no other choice but to succeed. Don't miss it! ★ ★ ★ ★

■ PITTSBURGH'S CHILD

Good Morning Miss Toliver doesn't take up policy questions or intellectualize about issues, but it says a great deal about what American education needs.

■ NEW YORK VOICE/HARLEM USA

Good Morning Miss Toliver presents an inspirational profile of an imaginative and caring junior-high-school teacher in East Harlem.

■ TV GUIDE

Good Morning Miss Toliver is a profile of a charismatic math teacher who inspires her disadvantaged pupils to do great things. Her enthusiasm, energy and creativity are infectious, as well as a reminder that the best way to improve America's schools is to get gifted people to become teachers.

■ BALTIMORE EVENING SUN

You may not think you can teach math with straws, raisins, construction paper and green slime. But Kay Toliver shows how it's all done in a PBS special tonight.

■ USA TODAY

Good Morning Miss Toliver is an affecting look at one inspired teacher, Kay Toliver, who uses everything from raisins to straws to TV jingles to teach math at East Harlem Tech/P.S. 72.

■ NEW YORK MAGAZINE

Award-winning middle-school math teacher Kay Toliver demonstrates how learning math doesn't have to be a horrible process. This half-hour special features Miss Toliver inspiring her East Harlem students to appreciate their history while exploring mathematics in architecture, business, the environment, and just everyday fun.

■ DALLAS MORNING NEWS

★ CRITIC'S CHOICE (PARTIAL LISTING) ★

NEW ORLEANS MAGAZINE

CABLE IN THE CLASSROOM

LOS ANGELES TIMES

BALTIMORE EVENING SUN

WASHINGTON POST

NEW YORK MAGAZINE

USA TODAY

MIAMI TIMES

DALLAS MORNING NEWS

BOSTON GLOBE

TV WEEK

DETROIT FREE PRESS

THE EDDIE FILES

featuring Kay Toliver

THE EDDIE FILES is a new series of 24, fifteen-minute programs for elementary school students, featuring the award-winning math teacher Kay Toliver.

FUTURES was designed to awaken middle school and high school students to the real-life applications of math—in fields ranging from skateboard design and fashion to architecture and outer space exploration. The content, exciting visual pace, and high production values of *FUTURES* have set a new standard for instructional television and made the series the most popular in-classroom series on PBS.

THE EDDIE FILES brings the excitement and motivation of *FUTURES* to the elementary school audience, but with a perspective designed to appeal to a younger audience. Students will learn about the world of applied math through the eyes of "Eddie", a fictitious 10-year-old student in Kay Toliver's classroom.

In addition to offering a view of Kay Toliver's inspiring teaching, Eddie takes viewers to the world outside the classroom, where they meet real people in real jobs. Classroom math is put into focus through connections to the application of math concepts in the real world. Like *FUTURES*, THE EDDIE FILES is not designed to teach math *per se*, but to inspire student interest by revealing the many exciting uses of the subject.

News of THE EDDIE FILES has been well-received. "We screened a preview of the series at our annual meeting of Instructional Television Directors," Joan Katz, Director of PBS Learning Services, recalls. "It's clear that it's going to be a big hit. Elementary school is not too early to give students a purpose for their studies, and there's just nothing like THE EDDIE FILES for this audience."

THE EDDIE FILES: Student and Teacher Surveys

Approximately 1,500 elementary, junior high and high school students and over 100 teachers from schools across the country responded to a wide range of preliminary viewer target surveys to evaluate a four-minute overview tape of **THE EDDIE FILES**. Activities conducted by the producers included extensive phone queries, in-classroom tests and audience surveys at special screenings. A wide spectrum of educators and administrators were also shown clips from **THE EDDIE FILES** and asked for their feedback.

Even television station managers and programmers were contacted about the show—especially its length and format. At FirstView, for example, the annual conference at which Instructional Television directors from cities throughout the country choose potential educational programming for their stations, responses to **THE EDDIE FILES** were highly favorable.

A quick summary of initial findings:

- 95 elementary school teachers from 11 rural and urban schools spread across the nation recently viewed the tape. 92% gave it a positive or very positive rating.
- 81% of these same teachers thought **THE EDDIE FILES** should be used to motivate students in grades 4-6.
- A sampling of 20 educators, including teachers, administrators, staff development professionals who had viewed *Good Morning Miss Toliver* were contacted by phone and given a description of **THE EDDIE FILES** for possible use in their classrooms. 75% were positive that the series would be valuable.
- A wide range of teachers and students chose "Eddie," the fictional student who narrates the program, and the "files" that he keeps as their favorite aspects of the show.

The most important audience, 714 students in grades 4-6, representing a wide ethnic, geographic and economic cross section viewed the presentation tape in their classrooms.

- How did they rate the show? 86% said it was good to excellent, with over half saying it was excellent.
- Would they want to change anything? 76% of the students (and 61% of the teachers) said they would not change a thing.
- What was their favorite aspect of the show? More than half listed the host teacher, Kay Toliver.
- How did minority students react? In predominantly minority schools, students reacted as enthusiastically to the show as did students from schools with mostly white students. In fact, in a small sampling that was 99% Hispanic, every student rated the show excellent or good. 71% said they would definitely like to know more about the careers presented. When fourth graders were surveyed in a predominantly African-American, inner city school, 90% said they were interested in finding out more about the careers portrayed, and 96% rated the show as good or excellent.

The producers wanted to verify that careers and workplaces would be of interest to elementary school students (grades 4-6). The level of interest in such material was found to be very high.

- Did THE EDDIE FILES make them more interested in finding out how math is used in the real world? 95% said yes or maybe; 60% said definitely yes.
- 67% came away from the show curious about jobs like the ones presented during the program.

In a very preliminary effort to address the cross-disciplinary value of THE EDDIE FILES, the show was also tested on a number of ESL and Special Education students. They were just as enthusiastic about the show overall, and in certain categories, they were even more receptive. For example, 100% of the ESL students said they would not change a thing about the show.

These findings indicate that the series concept and elements are well-accepted by students and teachers, and even more important, that the elements are communicating clearly the message that math studies can open the door to rewarding careers and exciting possibilities.

- Over 700 junior and senior high school students watched a clip from **THE EDDIE FILES** on Pre-college Day at the Hispanic Engineers National Achievement Awards Conference. Out of 435 completing surveys, 81% rated the clip as excellent or good.

The following comments demonstrate the level of enthusiasm for the project:

Teachers (sample survey responses):

It may help students start thinking about their future and give them the power to control their destiny.

(THE EDDIE FILES) can get kids motivated at a younger age so that they have an idea why math is important...

Resources like these are invaluable to getting students to think about their futures.

Very inspiring. Get(sic) some students in the right frame of mind.

I think that something like this needs to be around so students can see the relevancy of studying math.

I lead school-parent groups and I would use it in that as well as with my students and teachers.

It gives kids a message to think and dream and have goals.

...Lots of positive modeling for inner city kids.

Motivating...I mean to the teachers - it inspires excellence.

(I like) the enthusiasm of the teacher - active learning involving problem solving.

(The show) seems like a good way to show that math is needed for real life - it's not something teachers invented to keep kids busy at school.

Excellent idea. Plant those seeds about education early.

Students (Sample of responses to "What did you like best?"):

It encourages me and other students to learn about math and other subjects and to stay in school.

Teachers are dream-makers and he (Eddie) likes it because he has lots of dreams.

He makes files of a variety of things so he can get an idea of what to be.

It shows that even when you think you do not need numbers or math, you really do need it.

It shows how math is all around you.

I like the part when the teacher dresses up like a wizard.

It showed how you could make learning fun.

Educators talk about **THE EDDIE FILES**

I am pleased to support FASE's proposal to produce THE EDDIE FILES...The teachers I work with in Texas know the importance of motivated students and value your films as a way to achieve this...In our training institutes this summer for vertical teams of math teachers, I have been surprised to learn how many teachers already know about Kay Toliver. Her tape is the best resource we have to help teachers fully understand the benefits of "hands-on" teaching techniques...As a member of the Corporation for Public Broadcasting and chairman of its Education Committee, I know that your films contribute to the fact that public broadcasting is increasing its prime time children's audiences.

—CAROLYN R. BACON, CHAIRMAN EDUCATION COMMITTEE,
CORPORATION FOR PUBLIC BROADCASTING

There was the constant link between math and communication. Wonderful! If they can explain it to others, they must understand it themselves.

—MELVIN E. LEVISON, PROFESSOR EMERITUS,
BROOKLYN COLLEGE OF THE CITY UNIVERSITY OF NEW YORK

Having worked with the 7th and 8th graders the past nine years in MATHCOUNTS had led me to believe that we need to target the younger ones. I am very pleased to see you target the 9-11 year-olds...Capturing this power to show our youths how math and careers relate is what our country desperately needs. I have reviewed the "Kay Toliver" tape. All I can say is wow! She is fantastic. How she can reach her students!

—W. CLIFFORD ISHII, P.E., STATE COORDINATOR,
MATHCOUNTS

I've taken a look at Good Morning Miss Toliver and THE EDDIE FILES, and I think they're both just terrific. Kay Toliver is a magician in the classroom, and your programs have done an admirable job of telling her story.

—ANDREW CALKINS, EXECUTIVE DIRECTOR,
RECRUITING NEW TEACHERS, INC.

I'm writing to confirm my interest and overt support for your new series, THE EDDIE FILES...I'm convinced that such motivational work in the early grades will help young people see better the excitement in working in careers that depend

upon math and science. Creating such early awareness and motivation empirically results in (a) more non-traditional career interests, especially for girls, (b) increased motivation producing increased achievement, (c) more post-secondary majors in math and science in college, and many more. Additionally, using mentors and role models is the most effective technique which can be delivered extremely well via the media of VCR and television...It looks like THE EDDIE FILES will be even more powerful than your FUTURES series.

—HARRY DRIER, PRESIDENT,
CAREER, EDUCATION, & TRAINING ASSOCIATES, INC.

I just want you to know how thrilled I am about FASE's new initiative with Kay Toliver, THE EDDIE FILES! I'm still dabbing the tears from my eyes having reviewed some of the moving footage you shot of Kay Toliver and her students at East Harlem Tech. Leave it to you to engage Kay Toliver - a gem of a teacher - and to propose a project that will bring Kay, her innovative teaching techniques, Kay's students, and their infectious enthusiasm for learning, to television.

—JOAN H. KATZ, DIRECTOR,
PBS ELEMENTARY/SECONDARY SERVICE

THE EDDIE FILES is the type of programming that is needed to encourage youth to enter fields they may not otherwise chose. As a member of both the House of Representatives' Science, Space and Technology Committee and Education and Labor Committee, I am extremely pleased to see that FASE is committed to continue its fine efforts to create quality educational programming.

—XAVIER BECERRA,
MEMBER OF CONGRESS

I have had the opportunity to preview THE EDDIE FILES...unique in its format, appealing to youngsters of a variety of ages...I have previously raved about the excellent presentation on Ms. Toliver...see the continuation of these wonderful educational qualities carried through to THE EDDIE FILES...I was personally touched by the idea that teachers are dream makers. This series has tremendous potential.

—HELENMARIE HOFMAN, ASSOCIATE PROFESSOR,
MATH AND SCIENCE EDUCATION
GETTYSBURG COLLEGE

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