THE GIRLS REPORT: WHAT WE KNOW AND NEED TO KNOW ABOUT GROWING UP FEMALE

Dr. Lynn Philips, a research scholar with the National Council for Research on Women, presented research and findings from *The Girls Report*, which she authored. *The Girls Report* reviews current statistics on health; social science studies on sports, sexuality and education; and feminist policy analyses, synthesizing the present state of research on today's adolescent girls. *The Girls Report* is a sequel to *Risk, Resiliency, and Resistance: Current Research on Adolescent Girls*, which was produced by the National Council for Research on Women for the Ms. Foundation in 1991.

As *The Girls Report* explains, adolescence can be both a rich and challenging time for girls as they confront new ideas, explore life's possibilities, and navigate through the stormy seas of physical, social, behavioral, and emotional changes. How are girls meeting these challenges? The research and policy studies reviewed and analyzed for this report provide a mixed picture of progress and continuing struggles.

Several large-scale national studies suggest that girls are as likely as boys of the same age to smoke cigarettes, that they have inadequate access to sports programs that offer physical, social, and psychological benefits, that they are twice as likely as boys to be depressed, and that they often are the victims of violence.

On the other hand, new evidence identifies other, more encouraging trends. In school, girls continue to do well in reading and language, and their math achievement now almost matches that of boys. The teen birth rate has declined steadily since 1992, after rising by 25 percent between 1986 and 1991, and although access to contraception and abortion services has been restricted in many states, more teens appear to be using contraception than ever before.

Conclusions and recommendations from *The Girls Report* include:

- Girls are multidimensional individuals with diverse perspectives, needs, and developmental contexts.
- Girls can benefit from programs and strategies that build on their strengths and encourage them to explore meaningful possibilities for their futures.
- Research must continue to play a role in deepening our understanding of girls' needs and how to respond to them.
- Girls require and deserve the awareness, attention, and commitment of a wide range of individuals and institutions to promote their healthy development.
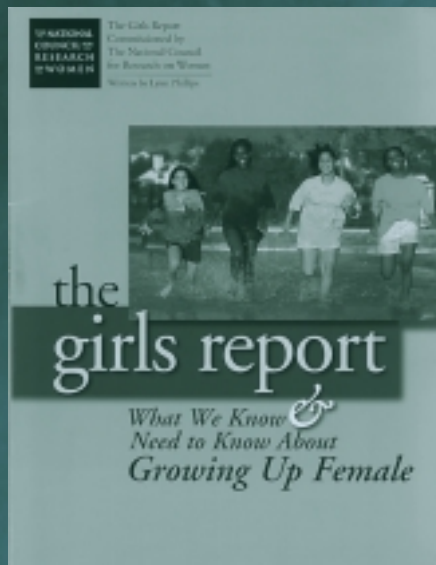- Adults should listen to what girls have to say about their own lives.

Dr. Lynn Philips
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IF I COULD TELL ADULTS ANYTHING THAT WOULD MAKE MY LIFE BETTER, IT WOULD BE TO LISTEN TO YOUNG PEOPLE AND HELP THEM OUT. I'M YOUNG AND STRONG AND INDEPENDENT, BUT THERE ARE ALSO AREAS WHERE I NEED HELP, LIKE AT SCHOOL AND MY NEIGHBORHOOD AND AT HOME. KIDS NEED HEALTH CARE AND GOOD SCHOOLS AND SAFE STREETS AND CONSTRUCTIVE THINGS TO DO WITH OURSELVES. IT'S HARD ENOUGH BEING YOUNG, BUT BEING A GIRL, AND THEN THERE'S WHERE YOU LIVE AND THE COLOR OF YOUR SKIN, IT CAN BE REALLY HARD GROWING UP. I WOULDN'T EVER TRADE WHO I AM, I'D JUST MAKE SOCIETY HEAR US BETTER. YOUTH HAVE A LOT TO OFFER THIS WORLD, BUT SOMETIMES GIRLS AREN'T TAKEN THAT SERIOUSLY. BUT JUST WATCH ME. ME AND MY GIRLS ARE MAKING SOMETHING OF OURSELVES.

-TARA, AGE 15 (SELF-DESCRIPTION: "AFRICAN AMERICAN, FEMALE, STUDENT")

NATIONAL COUNCIL RESEARCH WOMEN

The Girls Report
Commissioned by
The National Council
for Research on Women
Written by Lynn Phillips

the
girls report

What We Know &
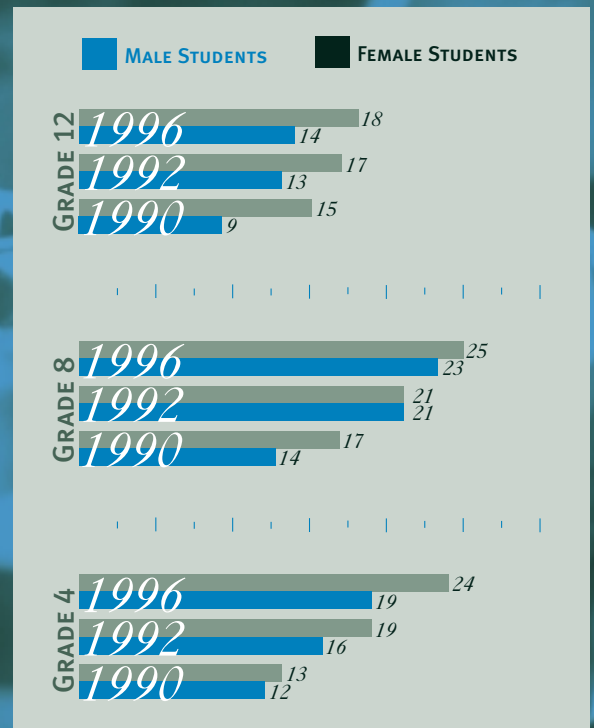Need to Know About
Growing Up Female

Statistics on Women in Science

Mary Golladay presented statistics on the participation and performance of girls in K-12 and women in higher education and in the workforce. The statistics were very current, providing attendees with an advance look at trends up to 1996. They have subsequently been published in the latest biannual edition of *Women, Minorities, and Persons with Disabilities in Science and Engineering*: 1998, NSF 99-338.

Total Science and Engineering Master's and Doctorate Recipients by Sex: 1970-95
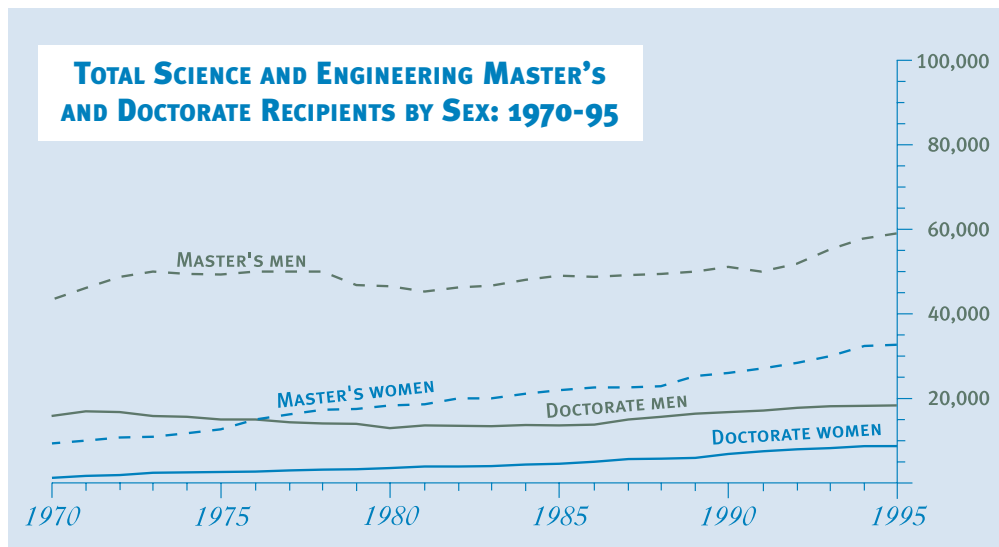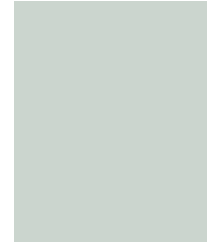
Dr. Mary Golladay
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Percentage Attaining Mathematics Proficiency Levels on the National Assessment of Educational Progress for Grades 4, 8 and 12 by Sex, in Selected Years

■ Male Students   ■ Female Students

Grade 12

1996
- 18
- 14

1992
- 17
- 13

1990
- 15
- 9

Grade 8

1996
- 25
- 23

1992
- 21
- 21

1990
- 17
- 14

Grade 4

1996
- 24
- 19

1992
- 19
- 16

1990
- 13
- 12

How to Market Materials

"We used to think our job description was clear," said Drs. Chasek and Campbell during their presentation at this year's conference. "We conducted the research, designed the programs, developed the products, and considered the work complete." Then one day, they made a major realization: If no one read their report, implemented their program, or tried their product, then the work was not only incomplete, but wasted. To address this concern, they developed *Making A Splash: A Guide to Getting Your Programs, Ideas and Products Out.* This short, easy-to-use manual was written with the assumption that the reader has little or no experience in marketing and the media. *Making A Splash* offers suggestions, insights and practical steps to getting the product out and the message heard, as the following excerpt demonstrates:

### BEGINNING AT THE BEGINNING: GOALS

What is your goal?

"What is your goal?" is simple to ask but hard to answer. Comedians and management gurus remind us of what can happen if we don't have goals and don't know where we are going. We all know that it is key to have a direction, a purpose, a goal, to know what we want to happen. Thus, the first step is to determine what your goals are.

Goals may not all be altruistic. While staying employed is not the best primary goal for a social change project, it is realistic to acknowledge that if you stay employed, your project stands a better chance of success. Goals do need to be specific. While "to change the world" is a laudable goal, it is too broad and needs to be narrowed. In what ways do you want to change the world? In what areas? As part of your goals, it is important to ask who your primary audiences are. The answer may be quite different from what you first thought.

- If your major goal is to seek grants, your primary audience may be foundation and government program officers rather than teachers or educational decision-makers. If so, your efforts should be directed toward them.
- If your goal is to have teachers receive your training, your primary audience may be those people who do the teacher training or those who make the decisions about teacher in-service, such as science supervisors and other administrators, rather than the teachers themselves.
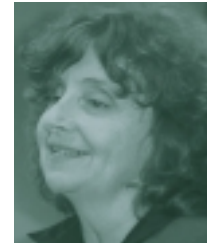
Remember while you may have many different audiences, your primary audiences are the one or two that are most important to your product and whose participation is key.

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Making A Splash can be downloaded for free from www.campbell-kibler.com or purchased in print from Campbell-Kibler Associates (campbell@campbell-kibler.com).
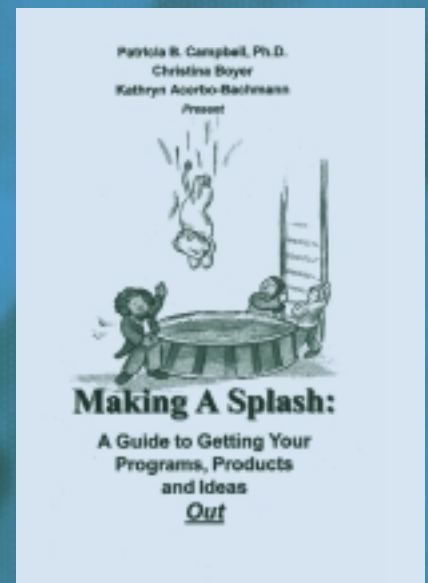
As you write your goals, pretend someone is sitting

right next to you saying: "What do you mean by that?"

So if your goal is to "create a community of learners,"

be ready to explain what that means.

- Making A Splash, p. 7

Patricia B. Campbell, Ph.D.
Christina Boyer
Kathryn Acerbo-Bachmann
Present

Making A Splash:

A Guide to Getting Your
Programs, Products
and Ideas
__Out__

CD-ROM and Web Site

PWG has supported more than 100 important curricular innovations, professional development efforts, and informal learning opportunities for women and girls in science, engineering, mathematics, and technology. EDC's Center for Children and Technology worked with NSF to develop *A Lifetime of Science, Engineering, and Mathematics*—an engaging CD-ROM of PWG project interventions and materials to increase awareness of the excellent work in gender equity that NSF has supported.

A Lifetime of Science, Engineering, and Mathematics was created in response to many principal investigators' requests for a means to gather and disseminate information about the broad range of innovations that have resulted from PWG over the years. EDC's Center for Children and Technology took on this task because much of the Center's work focuses on how to use new technologies to shape and share information in ways that are useful to educators. Furthermore, CCT was interested in gathering gender equity resources into one place and making them useful for different projects—such as EDC's own online mentoring program, funded by PWG.

The CD-ROM showcases how twelve projects have concretely addressed gender equity issues in mathematics, science and technology at every stage of development in the lives of girls and women. The CD-ROM highlights innovative solutions to the following four key gender equity challenges:

- Retention—how to sustain the interests of women and girls in math, science and technology.
- Engagement—how to develop curricula that offer alternative entry points for girls into math, science, and technology.
- Know How and Experience—how to provide necessary hands-on experience and knowledge needed for entry into science and technical fields.
- Awareness—how to promote sensitivity to the needs and concerns of women and girls in science and technical courses and careers.

Dr. Bennett demonstrated the CD-ROM and highlighted some of the design issues that arose in trying to represent the vast array of programs that have grown out of PWG. More specifically, her presentation offered insights into the following issues:

- Selecting a navigational metaphor that conceptually aids the user in seeing connections between projects.
- Deciding on how much information can be included with limited production resources.
- Selecting a programming language that would make the CD timely and promote cross-platform use.

The audience for the CD-ROM includes K-12 teachers, university educators, parents, content developers, industry, and the research community. The CD-ROM is currently being offered for free by EDC's Women's Educational Equity Act Resource Center.

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For more information, visit www.edc.org/CCT/pwg or send a request for the CD-ROM to WEEActr@edc.org.

In addition to feature projects, the CD-ROM also offers

a directory of project fact sheets for PWG programs

funded through spring of 1998.

Making the Most of Listservs

There are more than fifty discussion lists dealing with gender equity, and more than 200 lists that deal, at least in part, with issues of gender and science. Dr. Carolyn Carter of the Appalachia Educational Laboratory offered suggestions for becoming familiar with listserv capabilities, and for navigating through the many listservs that are currently available. Following is a short list of popular groups from Dr. Carter's presentation, along with brief descriptions and subscription information.

WISENET—WOMEN IN SCIENCE AND ENGINEERING NETWORK Education and employment of women in the sciences, mathematics, and engineering. To subscribe: Send a message to listserv@UICVM.CC.UIC.EDU, no subject, with the message "subscribe wisenet first_name last_name."

WOMUNSCI—WOMEN UNDERGRADUATES IN SCIENCE Increasing participation of undergraduate women in science. Membership is open to college science educators and administrators and women undergraduates interested in science. To subscribe: Send a message to majordomo@cs.umass.edu, no subject, with the message "subscribe womunsci_your e-mail address_your name."

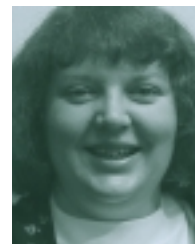WITI—WOMEN IN TECHNOLOGY Aspects of women in technology. To subscribe: Send a message to witi-request@aero.org.

WIPHYS—WOMEN IN PHYSICS Advice, networking, and issues of interest to women in physics. To subscribe: Send a message to majordomo@aps.org, no subject, with the message "subscribe wiphys."

GRADUATE WOMEN IN SCIENCE ELECTRONIC DISCUSSION GROUP— Affiliated with Sigma Delta Epsilon/Graduate Women in Science (SDE/GWIS): Interested women scientists with access to the Internet. To subscribe: Send a message to sheri_cole@som-bsb.ucsd.edu.

FIST—FEMINISTS IN SCIENCE AND TECHNOLOGY Feminists in science and technology, feminist science and feminist critiques of science and technology. To subscribe: Send a message to listserv@dawn.hampshire.edu, no subject, with the message "subscribe first first_name last_name."

SYSTERS—Issues of mutual interest to professional women in the field of computing. To subscribe: Send a message to systers-admin@systers.org with "subscribe" in the subject line.

EDEQUITY—Forum to discuss how to attain equity for males and females and how gender equity can be a helpful construct for improving education for all. To subscribe: Send a message to Majordomo@mail.edc.org, no subject with the message "subscribe edequity" and/or to subscribe to the digest "subscribe edequity-digest."

WIGSAT—WOMEN IN GLOBAL SCIENCE AND TECHNOLOGY NETWORK International collaboration and coalition building for development among women scientists and technologists around the world. To subscribe: Send a message to: WIGSAT-L@list.ifias.ca, no subject, with the message "subscribe."

WMST-L—WOMEN'S STUDIES LIST Discussions of the instruction and development of Women's Studies courses and programs and the current research. This list does not allow discussions of gender, social, or political issues. To subscribe: Send a message to listserv@umdd.umd.edu. with the message "subscribe to WMST-L."

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The Listserv for Women and Girls (pwglist@ael.org)

Dr. Carter developed and maintains the PWG listserv, an electronic discussion list for current and past recipients of grants from the NSF Program for Women and Girls, and those who have a close working relationship with the program. This list provides members with a way to share information, ask questions, and discuss issues or problems with others who are doing similar work.

The complete list of PWG subscribers is included as an insert to this brochure. To send a message to the PWG list, address it to pwglist@ael.org.

To have your name added to the PWG list, contact Dr. Carter at 800-624-9120 or carterc@ael.org.

SEARCHING THE WEB ON WOMEN AND GIRLS IN SCIENCE

With the number of web sites growing exponentially every day, nobody has enough time to keep up with it all. Stephanie Bianchi, NSF's Librarian, shared tips on how users can make what is new on the web come to them, rather than going to find it themselves.

Her first suggestion was signing up for a newsletter that provides this service. One such newsletter is the Scout Report (www.scout.cs.wisc.edu/scout/report/), which comes out periodically on a number of subjects. Another approach is to visit one of the many sites on the web that regularly list new sites. Some of these are general interest (Yahoo "What's New" at http://www.yahoo.com/new/), and many are specific to a subject area ("Websurfers Biweekly Earth Science Review" at http://shell.rmi.net/~michaelg/weeksreviews.html). Users can bookmark a site that pertains to their interests, and visit it regularly for the latest information.
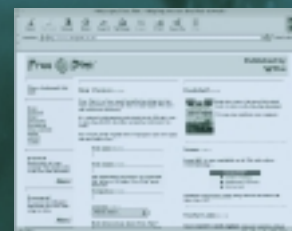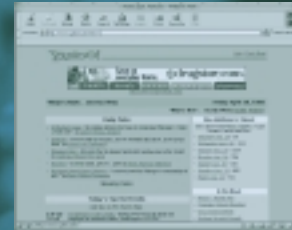
Some sites offer an e-mail feature that automatically alerts users to new information; Bianchi cited Blue Web'N (http://www.kn.pacbell.com/wired/bluewebn/) as one excellent example. Or, she suggested, users can try the Netminder service (http://minder.netmind.com/), which visits daily sites specified by the user, and sends e-mails whenever one of the sites changes.

Bianchi also suggested that users investigate the sites that are linked to their favorite sites. For more information on this process, Bianchi referred attendees to the article "Reverse Psychology - How to find more sites like the ones you love," written by William Hann and located at the Free Pint web site (http://www.freepint.co.uk/). The bottom line, according to Bianchi: "There is too much on the WWW for any one person to keep track of it. Make the web work for you!"

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http://www.yahoo.com/new/

http://www.kn.pacbell.com/wired/bluewebn/

http://www.freepint.co.uk/

http://www.scout.cs.wisc.edu/scout/report

Government Performance and Results Act of 1993: Update on NSF Response

Dr. William Sibley of NSF's Division of Research, Evaluation and Communication reviewed the major points in the Government Performance and Results Act of 1993 (GPRA), and discussed with attendees the implications of this Act for NSF. To comply with GPRA, NSF must:

- Clearly define its mission.
- Establish annual performance goals that are objective, quantifiable, and measurable.
- Measure its performance against these goals.
- Report publicly how well it is doing.

Dr. Sibley stressed the importance of developing measurable results. In setting performance goals, he explained, NSF must develop tangible objectives against which actual achievements can be compared. These objectives should include goals that can be expressed as a quantitative standard, value, or rate. Dr. Sibley then defined some key vocabulary used in the GPRA. "Inputs" are the raw materials and human and physical capital required for the research process. "Outputs" are the immediate, observable products of research and activity. Dr. Sibley defined "outcomes" as the longer-term results to which the program

contributes, and "impacts" as the total consequences of a program, including the intended benefits and the unintended results— both positive and negative.

To demonstrate outputs as defined by GPRA, Dr. Sibley presented these examples from the Louis Stokes Alliances for Minority Participation Program:

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For more information on the Government Performance and Results Act, see www.nsf.gov/od/gpra/.

The Evaluation of NSF's Program for Women and Girls

Drs. Toni Clewell and Lindsay Tartre of The Urban Institute presented an overview of the ongoing impact study of the Program for Women and Girls. The impact study endeavors to measure PWG's impact on the knowledge base, infrastructure, and individual participants in the area of women and girls in science, mathematics, engineering, and technology. The study focuses on the 119 PWG projects awarded between 1993 and 1996, a random sample of which is being studied closely.

The design of the impact study is segmented into modules, with each module addressing relevant questions about the program.

MODULE ONE: CONTRIBUTIONS TO THE KNOWLEDGE CAPITAL Are the instructional products that resulted from PWG of high quality and have they been effectively disseminated and used by other parties? Have they effectively filled any particular niche in science and mathematics education reform? How has PWG contributed to the scholarly body of work or led to greater levels of understanding about effective strategies to employ in the area of women and girls and science and mathematics?

MODULE TWO: CONTRIBUTIONS TO SOCIAL CAPITAL What has been PWG's impact on the educational infrastructure? What partnerships have been formed and what have they yielded? What policies and practices were altered because of PWG? Have PWG project innovations been replicated elsewhere?

MODULE THREE: CONTRIBUTIONS TO HUMAN CAPITAL What has been the impact of PWG on the participants or other target audience members of the projects? Was the experience of high quality and lasting duration? What types of experiences seemed to succeed or fail in having an impact on women and girls?

MODULE FOUR: PROJECT EVALUATION META-ANALYSIS AND ASSESSMENT What is the overall frequency, methodological soundness, and quality of project-level evaluation? What types of interventions seem to produce similar outcomes?
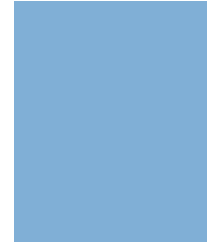
The study will assess PWG's success at meeting its programmatic goals. It will do this by collecting and analyzing data pertaining to the questions outlined under each of the four modules above. Interviews of principal investigators, evaluators, and others involved in the sample of PWG projects are currently underway, and a report will be delivered to PWG in late summer of 1999.

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By aggregating data from all the sample projects, the impact study will be able to measure the collective impact of PWG projects.

WORKSHOP ON EVALUATION

Dr. Joy Frechtling of Westat provided an orientation to project evaluation. She reviewed the importance of the different types of evaluation—planning, formative, and summative—and explained the value and importance of each to the program, as well as to NSF. Her presentation focused on how to develop measurable objectives by defining outcomes as behaviors or observations that can be assessed and, in most instances, quantified. The strengths and weaknesses of quantitative and qualitative data collection methods were also discussed.

For more information, see the following publications by Dr. Frechtling, used in her presentation and available through NSF.

NSF 93-152 (reprinted 6/92)
User-Friendly Handbook for Project Evaluation: Science, Mathematics, Engineering and Technology Education. Ed. by Joy Frechtling, Westat, Inc.

NSF 97-153
User-Friendly Handbook for Mixed Method Evaluations. Ed. by Joy Frechtling and Laura Sharp, Westat, Inc.
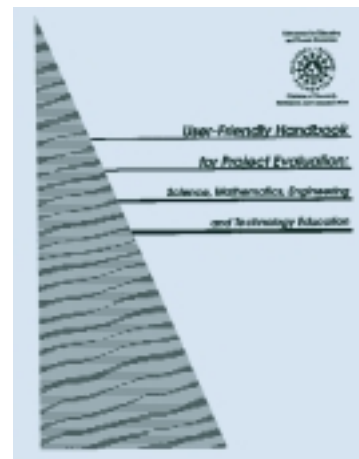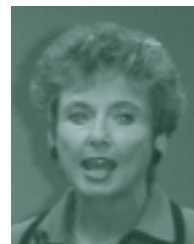
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See the back of this brochure for information on how to order NSF Publications.

Evaluations can serve many different needs and provide critical data for decision-making at all steps of project development and implementation. Although some people feel that evaluation is an act that is done to a project, if done well, an evaluation is really done for the project.

—*User-Friendly Handbook for Project Evaluation*, p. 10

FastLane Demo and Q&A

Evelyn Baisey-Thomas, a member of the FastLane Team in NSF's Division of Information Systems, educated conference attendees about the use of FastLane (www.fastlane.nsf.gov) for electronic communication with NSF. The purpose of FastLane is to use the web to facilitate business transactions and the exchange of information between NSF and its client community—researchers, reviewers, research administrators, and the general public. Several colleges and universities nationwide are assisting NSF in the design and evaluation of FastLane.

Baisey-Thomas' presentation reviewed a range of features that are accessible via FastLane, including:

- NSF Award Search—Users may query the NSF database by state, institution, NSF program, and fiscal year within each category. FastLane also provides lists of recent awards by week.
- Budget Internet Information System—Provides detailed financial information on grants.
- Graduate Research Fellowships—Application, accompanying forms, and letters of reference for NSF Graduate Research Fellowships can be created and submitted using this feature.
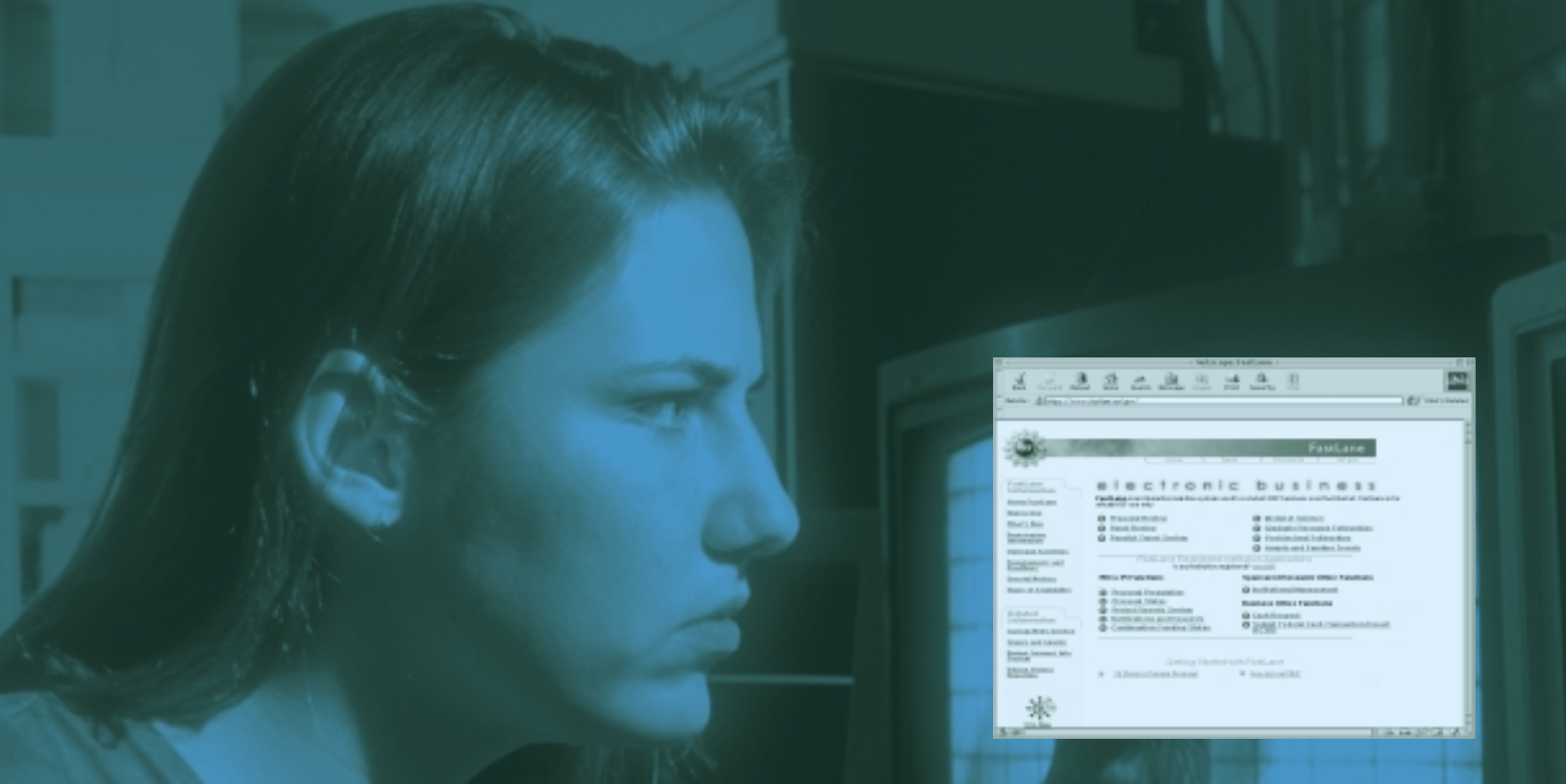- Medal of Science—Nominations and letters of support for recipients of the Medal of Science can be created and submitted here.
- Proposal Review—NSF reviewers can submit ratings and comments on proposals. Using a special PIN, the reviewer can access a template for recording comments and other required information.
- Panel Review—Panelists can submit one or more reviews of NSF proposals using a password and panel ID.
- Proposal Status—Grant applicants can check on the receipt and status of the proposals they have submitted. FastLane provides information including the date NSF received it, the NSF program name, and the assigned Program Officer.
- Proposal Preparation—Principal Investigators can prepare all required NSF standard proposal forms using this option. FastLane checks forms for completeness before allowing them to be submitted.
- Final Project Report—Provides Principal Investigators with report template for submission of Final Project Reports to NSF.

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Nonregistered users can visit the FastLane Development web site at www.fldev.nsf.gov to simulate most FastLane features and provide reactions and comments.

FastLane