

MAKING THE MATCH BETWEEN LOWER-INCOME WOMEN AND INFORMATION TECHNOLOGY CAREERS

THE UPGRADE YOUR FUTURE PUBLIC EDUCATION CAMPAIGN

Women Employed Institute



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ABOUT WOMEN EMPLOYED

Women Employed is one of the nation's foremost advocates for women's economic advancement. Since its founding in 1973, the organization has won historic changes in public and private sector policies that have expanded women's opportunities and improved workplaces throughout the country. Each year, Women Employed's accomplishments translate into thousands of individual success stories—women who are able to use their talents in more occupations, earn better wages, and achieve their aspirations.

Women Employed has two main goals: to ensure equal employment opportunity and fair workplace practices, and create and advocate for paths out of poverty through employment. The organization promotes changes in both government and business practices and develops innovative programs to overcome employment barriers. Women Employed's current priorities include campaigns to increase tuition assistance in Illinois,

raise awareness of careers in growing fields like information technology, promote paid family leave, and ensure fair pay.

Women Employed helps individuals get involved in making these changes happen. The organization sponsors the Women Employed Women's Information Network, WE-WIN, a free e-mail network that helps people make a difference on women's economic issues. Through WE-WIN, you can find out about issues affecting women's economic status and make your voice heard by contacting policymakers. To sign up for WE-WIN and get the information you need to help improve opportunities for women, visit our website at www.womenemployed.org. Fact sheets and statistics on women's employment issues are also available at this site.

For more information about the Upgrade Your Future program, visit www.upgradeyourfuture.org or call Women Employed at 312-782-3902.

Table of Contents

Introduction	1
Research Findings: Are Lower-Income Women and Information Technology a Good Match?	2
The Campaign: Upgrade Your Future	4
Recommendations	5
Conclusion	7
Appendix A: Characteristics of Women Surveyed	8
Appendix B: Top Five Messages that Encourage Women to Consider Information Technology Careers	9

Introduction

A strong economy requires a qualified and diverse workforce, especially in key fields like information technology. Despite reports that employers are hiring fewer IT workers, computer-related occupations will be among the fastest-growing occupations over the next decade.¹ The growth of these jobs means that a pool of skilled workers will need to be available to meet the requirements of employers.

Yet Illinois lacks an effective pipeline to bring women and minorities into technology jobs. Illinois women, and in particular minority women, are underrepresented in post-secondary information technology programs.² Unless this changes, employers will be unable to meet their needs for an information technology workforce that is both qualified and diverse.

At the same time, large numbers of Illinois women support themselves and their families on wages of less than \$30,000 per year.³ Many women move from one dead-end job to the next with very little access to high-quality information about good-paying jobs with advancement potential. For African American and Latino women the situation is even worse.⁴

To address the future demands of the labor market and the economic advancement potential of lower-income women, Women Employed created Upgrade Your Future, a public education campaign to encourage women, particularly women of color, to pursue careers in information technology. Research shows that information plays a key role in recruiting women to technical careers.⁵ Through Upgrade Your Future, Women Employed provides lower-income women with the information necessary to educate them about career and educational opportunities in IT and encourage more women to pursue these high-wage careers. Women Employed believes that educating lower-income women, particularly minority women, about good-paying jobs not traditionally occupied by these individuals will increase the number of skilled workers available to enter IT jobs and provide a new path to economic advancement for lower-income women.

This report briefly summarizes research that Women Employed undertook prior to the Upgrade Your Future campaign, details the materials and messages developed to inform lower-income women in Cook County, Illinois about IT careers, and outlines recommendations to promote the ongoing recruitment and retention of women and minorities in IT careers.

¹Hecker, Daniel E. "Occupational Employment Projections to 2010." *Monthly Labor Review* 127, no. 2 (2004): 100.

²In Illinois, women comprise one-third of all post-secondary information technology students. Six percent of students in IT programs are African American women and three percent of IT students are Latino women. Based on 2000 Illinois Board post-secondary IT degree programs.

³U.S. Bureau of the Census. *Money Income in the United States: 2001*. Prepared by the Housing and Household Economic Statistics Division in cooperation with the Demographic Surveys Division and Demographic Statistical Methods Division, Bureau of the Census. Washington, D.C., 2001.

⁴U.S. Bureau of the Census. *Current Population Survey, Annual Social and Economic Supplement Poverty Tables, 2003*. Prepared by the Housing and Household Economic Statistics Division in cooperation with the Bureau of the Census. Washington, D.C., 2003.

⁵Mastracci, Sharon H. "High-Paying Technical Occupations: Successful Programs for Employers, Unions and Women," *CUED Policy Brief*. Center for Urban Economic Development, University of Illinois at Chicago. (2003).

Research Findings: Are Lower-Income Women and Information Technology a Good Match?

One way of increasing the number of women in IT is to encourage girls in elementary and secondary school to participate in math and science and to focus on ways of increasing the likelihood that they will study technology at the postsecondary level. A far less common solution is to encourage adult women, particularly low-income minority women, to enter IT careers.⁶

Women Employed set out to determine whether lower-income adult women are receptive to learning more about and pursuing careers in information technology, and to discover what messages about IT resonated with this group of women.⁷ We sought their level of job satisfaction, interest in changing careers, receptivity to additional training or education, and interest in careers in information technology. We conducted a telephone survey of 334 women aged 25-45 in the Chicago area earning annual household wages of \$35,000 or below and supplemented this survey with two focus groups. The women that participated in the research were of diverse backgrounds, belonged to diverse household types and held a variety of jobs. They ranged from high school to college graduates, although three-quarters had not graduated from college. (For more detailed information on the respondents, see Appendix A.)

Our research indicated that women working in low-wage jobs have a strong desire to improve their economic prospects and see IT careers as a path to greater security for themselves and their families. Furthermore, as women learn more about careers in information technology—including salary levels, career paths, industries that

⁶ For the purposes of this work, we defined lower-income women as women with annual family incomes of \$35,000 or below.

⁷ Women Employed also conducted extensive prior research among IT professionals as well as a literature review; we describe this in our 2002 publication *Recruiting Lower-Income Women into Information Technology Careers*.

employ IT workers and job satisfaction levels—they are more likely to see IT as a potential career path for themselves.

Key findings from the survey included:

- The majority of the women (58 percent) expressed interest in changing jobs or careers.
- More than three-quarters were willing to return to school to get additional training to further their career and job opportunities. The majority of women (53 percent) see IT training as a worthwhile investment even in the face of pressing needs such as supporting a family.
 - Fifty-eight percent of the women with children were interested in returning to school to get additional education or training. Of those who are single mothers, the majority would consider a career in information technology.
 - Nearly three-quarters of the African-American women surveyed would consider going to school to get training for a career in information technology.
- More than three-quarters of those surveyed report using a computer at home, at work or in both places. Women who are interested in pursuing a career in information technology report that they are comfortable using computers and understand that having IT “know-how” is important to career advancement.
- However, about one-third expressed a strong disinterest in IT careers. These women saw IT jobs as “too technical” or “too hard” and did not see themselves as having the ability to be successful in an IT job. These women

generally were not familiar with using a computer. This is an important finding because it indicates that once women become familiar and comfortable with using a computer they are more likely to consider entering the IT workforce. Many women in low-wage jobs—such as those in administrative, sales, service and retail sectors—use information technology and have acquired familiarity and comfort with computers.

- Learning more about IT jobs caused women's interest levels to increase. Women who were initially interested were even more interested once they got more information.
- Women without college degrees were more interested in pursuing a career in information technology than those with more education. College graduates in this survey—although not among high wage earners—were more satisfied with their career choices.

Lower-income women proved to be interested in changing careers, willing to return to school to do so, in general comfortable and experienced with computers, and more interested in IT careers as they learned more about them. Therefore, a public education campaign to inform women about career opportunities in the IT field seemed to be a viable and effective response to the need to attract women to IT.

The Campaign: Upgrade Your Future

Based on the results of our research, Women Employed undertook a public education campaign to inform women about IT careers. The campaign targets women aged 25-45 in the Chicago area earning annual household wages of \$35,000 or below. To create the most effective campaign possible, we entered into partnerships with employers, educational institutions and community-based organizations that could provide us with guidance and ideas and serve as channels of communication and distribution.

The campaign distributed nearly 20,000 printed pieces, including posters with tear-off response coupons, flyers and mailing inserts, and placed video and radio public service announcements. All promoted two main information sources—a website and a booklet available by request from Women Employed—containing detailed information about IT careers.

Previous research, survey findings and message testing that we undertook in focus groups helped determine that for this campaign to resonate with lower-income women, it must address some of the misperceptions about IT careers. It must also provide concrete information on wages, education and training, and career paths. Finally, this campaign must utilize marketing channels that lower-income women were likely to encounter.

Some of the misperceptions about IT careers are that IT jobs are “too hard,” “too solitary,” involve working only at isolated IT firms, or are not for women. To counter some of these myths, the materials we designed for the Upgrade Your Future campaign contain the message that many women, especially those in service and administrative jobs, already possess some of the skills and abilities—good listening, customer service and problem-solving skills, and familiarity with computers—necessary for an IT career. These materials explain that IT jobs are available across employment sectors—for example, banking and health care. Importantly, to demonstrate that women like those in the target audience have been successful in IT careers, the materials profile women who have IT careers. Finally, a primary

message of the materials is that most IT jobs involve extensive interactions with others.

To attract lower-income women’s interest, the campaign materials focus on opportunities for good wages and benefits in IT careers. These materials also provide detailed information about opportunities for training and education. This includes information about the types of certifications and degrees that are necessary to get started in various entry-level IT jobs, the types of trainers and schools that offer programs, the various programs that will provide the specific skills that will launch a career in IT and the different schedules that schools offer which may be especially helpful to adults returning to school. The materials also illustrate entry-level career opportunities and the career paths that lead from these opportunities, and will soon include diagrams of these career paths.

In order for the target audience to benefit from the campaign, the campaign utilizes communications channels that reach women in their communities. The Chicago Public Library distributes materials in its local branches. Hair salons and churches received sets of materials to post. Community-based organizations distribute materials and promote the campaign. We solicited free media, both in major newspapers and in small, community newspapers. We also produced and ran a public service announcement on local radio and television stations.

As a result, between July and December 2003, the Upgrade Your Future web site received 50,000 hits. Approximately 10 percent of visitors to the site have sought additional information from the site. The on-line survey confirms that campaign materials have reached the intended target: sixty-one percent of those completing the survey report that they have less than a college degree; eighty-one percent report incomes of less than \$35,000 annually; sixty-two percent are African American or Latina. Ninety-six percent of those completing the online survey report that they believe information technology is a good field for women.

Recommendations

Women Employed offers these recommendations to close the information technology job gap. The recommendations center on conducting an information campaign, creating efforts to recruit and retain women among employers and educational institutions, and changing policy to support and sustain such efforts.

REPLICATING THE CAMPAIGN

These recommendations focus on content and distribution ideas that organizations can use to recruit women to IT careers, to other science and technology fields, and to other high-demand careers.

- Partner with employers, educational institutions and community-based organizations to serve as advisors and distribution outlets.
- Investigate perceptions of the field, and work to dispel any inaccurate perceptions that may be preventing potential candidates from considering the field. In the case of IT, these misperceptions included those about where the jobs are located (not just in IT firms), who does the jobs (not just men) and what these jobs involve (that they involve interaction, and are not too difficult or too technical). For specific messages that tested well in our survey and focus groups, see Appendix B.
- Highlight the skills that the target audience already possesses that will help in the field.
- Demonstrate that people from the target audience are successful in the field. Use profiles and pictures.
- Provide concrete information on salaries, benefits and career paths, and especially about entry-level opportunities.
- Provide detailed information about opportunities for training and education.

- Work with community organizations, others with strong presence in the communities targeted (for example, churches and libraries) and community newspapers to spread the word among lower-income women.
- Engage larger employers to distribute materials that educate their lower-end employees.
- Present career information material attractively and professionally, but simply, using non-technical terms.

EXTENDING THE EFFORT

These recommendations include ideas for ongoing recruitment and retention for those employers and educational institutions committed to increasing the numbers of women and minorities in IT careers.

Educational institutions can:

- In the case of community colleges, seek to recruit from community-based organizations, particularly community technology centers, which provide experience with computers to many women and minorities. They can also recruit from their own populations taking stand-alone computer classes, or those in upper-level adult education or GED classes.
- Create articulation agreements between community colleges and four-year colleges so that students can easily apply community college credits to four-year degrees.
- Ensure that credits earned for certificates can easily apply to two- and four-year degrees.
- Educate counselors about IT careers and encourage counselors to promote these careers to women.

- Create cohort or peer groups of women studying together to support each other throughout their studies.
- Provide support services, including access to child care, emergency assistance and transportation stipends when possible.

Employers can:

- Commit to diversifying their IT workforce by hiring and advancing more women and minorities.
- Recruit graduates from community colleges.
- Partner with community colleges and community-based programs to develop curriculum, offer internships and mentor students in IT fields.
- Provide job flexibility and opportunities for further training to employees where possible, particularly for entry-level employees. The women we surveyed ranked these two benefits as very important; practicing and promoting these aspects of IT jobs can be a good way to attract and retain employees.
- Provide mentors to entry-level employees, matching women to other women if possible.
- Make information about IT careers available to entry level women who may become interested in pursuing an IT career path.

- Make institutional and student aid available for short-term, non-credit coursework, which has the potential to meet employer needs for skills and employee needs for earnings in the shortest amount of time possible.
- Create and fund programs that address the needs of adults with low basic skills by providing adult basic education in conjunction with vocational training, and by connecting this to further education or training and entry-level work in high-wage and high-demand career sectors such as IT.

Additionally, lower-income women need fair access to workplaces, regardless of their ethnic background or family status. Policies to promote this would:

- Establish paid family leave and other family-friendly programs.
- Enforce laws that prohibit discrimination in hiring practices and that prevent sexual harassment.

CHANGING THE ENVIRONMENT

These recommendations focus on public policy changes to foster an environment that will make IT careers more accessible to women and support their success once they begin to pursue them.

For most lower-income women, entering the IT field will require further education or training. Policies that support access to education and training are therefore critical to their success. Such policies would:

- Ensure access to postsecondary education regardless of income by fully funding state and federal tuition assistance programs.
- Change welfare policies that curtail access to education and training for welfare recipients.

Conclusion

Women Employed’s public education campaign, Upgrade Your Future, is the first step in the process of closing the information technology job gap. This campaign set out to dispel misperceptions that prevent lower-income women from considering IT careers and provide the information they need to understand what IT careers can offer and how to pursue them. The campaign employs communications channels that will reach women in this group. So far, over 50,000 women have examined these informational materials.

Women Employed is committed to sustaining the effort and building on the momentum of the Upgrade Your Future campaign. Further work will entail deepening partnerships with and among institutions—community-based organizations, educators, employers and government—committed to increasing the number and percent of women and minorities entering the IT field. These institutions can create changes that will further promote the information developed in this campaign, as well as make education more accessible and workplaces more hospitable to a diverse population.

As part of this effort, during the second phase of the Upgrade Your Future campaign, Women Employed will examine a set of best practices among community organizations, educators and employers to promote recruitment and advancement of women in IT, design and pilot a mentoring program, and develop a career path map that defines entry level and advancement qualifications and training opportunities in IT.

There is great potential to meet workforce demands in technology by bringing together the needs of employers and the aspirations of lower-income women. The partnerships and products developed by this campaign strive to make this match to benefit employers, workers and the residents of Illinois.

APPENDIX A

Characteristics of Women Surveyed

Ethnicity

- Thirty-nine percent of respondents classified themselves as African American.
- Thirty-three percent classified themselves as white.
- Twenty percent classified themselves as Hispanic.
- Two percent classified themselves as Asian⁸.

Marital and Family Status

- Fifty-four percent had children under 18.
- Seventy-seven percent were single.

Educational Attainment

- Twenty-five percent of the women had graduated from college.
- Forty-five percent reported having some college education.
- Thirty percent had a high school diploma or GED.

Income

- All of the women surveyed had annual household incomes of under \$36,000.
- Nineteen percent earned under \$15,000 annually.
- Twenty-nine percent earned between \$15,000 and \$25,000.
- Fifty-two percent earned between \$25,000 and \$36,000.

Employment

- Seventy-nine percent worked outside the home.
- Eighty-five percent of those who were not employed were seeking employment.
- Sixty-seven percent were paid on an hourly basis.

⁸ The remainder classified themselves as other or did not answer the question.

APPENDIX B

Top Five Messages that Encourage Women to Consider Careers in Information Technology

These messages were effective among our survey respondents and focus groups.

- Many employers of IT workers pay for training to continually upgrade your skills.
- A starting technical support analyst earns an average of nearly forty thousand dollars a year, a computer programmer earns an average of forty-five thousand dollars a year and a Web designer earns an average of fifty-three thousand dollars a year WITH benefits such as health insurance.
- While there have been increases in unemployment in information technology, studies continue to show that people with computer skills are more likely to have a better career path in terms of pay, job security, and long-term learning.
- The City of Chicago and its surrounding suburbs offer a wide range of low-cost, convenient IT education and training opportunities, including weekend and evening courses, job placement services and online courses that offer student flexibility.
- IT jobs are good for women, because it has been shown that women make as much money as men in the same types of jobs.

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