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Got Women? Hiring and Retaining Female Information Technology Professionals Through Effective Human Resource Marketing

Abstract

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Keywords

computer, technology, communication, employee, system, information, IT, women, career, professional, HR

Comments

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Got Women? Hiring and Retaining Female Information Technology Professionals through Effective Human Resource Marketing

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**Got Women?
Hiring and Retaining Female Information Technology
Professionals through Effective Human Resource Marketing**

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This paper has not undergone formal review or approval of the faculty of the ILR School. It is intended to make results of Center research available to others interested in preliminary form to encourage discussion and suggestions.

ABSTRACT

The current pipeline for information technology (IT) professionals is dismal, with increasing jobs and decreasing applicants. We propose that one solution to this problem is encouraging women to pursue careers in IT. Today, women are underrepresented, and as a result, they comprise an untapped market segment. After discussing the current state of the industry, we propose that HR professionals should take a proactive, marketing approach to the recruitment and retention of women in the IT field. Lastly, we provide specific recommendations and discuss approaches taken by several companies to address this dilemma.

Information technology ("IT") is the super-engine that has propelled the U.S. economy to new heights during the past decade. There is mounting evidence, however, that this engine may soon run out of steam. A number of recent studies have confirmed what IT executives have known for quite some time - the pipeline for skilled technical talent is running precariously low.

The crisis has reached such a fevered pitch that the U.S. Department of Commerce ("DOC") recently consecrated the shortage of skilled IT professionals to be "America's New Deficit" (US Department of Commerce, 1997). Companies in technology-intensive sectors, such as computer hardware and software, information services, communications and banking and financial services, appear to be the hardest hit. However, the dearth of technically competent human resources places the future growth, competitiveness and prosperity of the entire U.S. economy at risk.

IT departments in virtually every industry are under-staffed, under-skilled, overworked and overwhelmed. The problem appears to be getting worse each day as the demand for technical talent continues to increase exponentially. According to a recent study by the Information Technology Association of America, there are approximately 346,000 unfilled jobs for "core" IT professionals (including computer scientists, computer engineers, systems analysts and computer programmers) across industry sectors in the U.S. today (Information Technology Association of America, 1998). The Bureau of Labor Statistics projects that U.S. industry will require more than 1.3 million new core IT professionals to fill new jobs and replace those workers who exit the industry between 1996 and 2006 (US Department of Commerce, 1998). This means that the demand for core IT professionals is expected to continue to grow at an average rate of about 137,800 per year through 2006 (US Department of Commerce, 1998).

While demand for skilled IT professionals continues to explode, the U.S. has experienced a distressing decline in the supply of talent. The total number of students earning bachelors, masters and doctoral-level computer science degrees from U.S. universities fell by 28% between 1986 and 1994, from 50,000 to 36,000 per year (US Department of Commerce, 1997). During the same time frame, the number of students earning bachelor-level computer science degrees fell by an astounding 42%, from 42,195 to 24,553 per year (US Department of Commerce, 1997). Although there is some evidence that the number of computer science graduates has begun to increase during the past couple of years, the production of talent remains far too low to satisfy market demand.

Employers are frantically struggling to respond to the realities of what is perhaps the tightest, most dynamic labor market in history. For many companies this simply means that they are putting out fires by throwing money wherever it is needed to keep projects fully staffed. This trend, characterized by brutal bidding wars and high turnover rates, has resulted in an enormous

upward pressure on labor costs. Because high labor costs will make it more difficult for companies to remain competitive in the long-run, this dangerous trend cannot be sustained.

To make matters worse, the shortage of skilled IT professionals is a global phenomenon. This means that increased immigration and foreign outsourcing cannot be relied upon to supply necessary technical talent (US Department of Commerce, 1997). It also means that the only way that U.S. employers can survive and thrive in the global economy will be to make full use of this nation's human capital. To do so, corporate America must find creative ways to increase dramatically the quality and quantity of available IT professionals.

WOMEN - AN OVERLOOKED SOLUTION TO THE IT STAFFING CRISIS

One place where employers can be proactive, and differentiate themselves from the competition, is to actively recruit and retain women in IT. Women currently comprise 51% of the U.S. population and nearly 46 % of the national workforce. Despite their large and increasing presence in the labor force, women are significantly underrepresented within the IT field. Among the core IT professions, women are the most highly represented in the computer programming field, where they comprise an estimated 31% of the workforce, and the least well represented in the higher-level computer engineering field, where they comprise a meager 8% of the workforce (High Tech Workforce Resource Center, 1998). While the number of bachelor-level computer science degrees declined across the board for many years, the percentage decline has been much larger among women than men. Women earned only 28.4% of all bachelor level computer science degrees awarded in 1994 - an 8% decline from 1984 (US Department of Commerce, 1997). Between 1986 and 1996, the actual number of women who earned bachelor degrees in computer science fell by more than 50% - from a high of 15,126 to a low of 6,954 (High Tech Workforce Resource Center, 1998). The statistics for women in the computer engineering education pipeline are even more dismal.

The under-representation of women in the IT workforce and education pipeline is a serious economic problem that has exacerbated the current staffing crisis. Reading the proverbial demographic handwriting on the wall, this problem only promises to become more formidable as women continue to enter the workforce in droves. According to the Bureau of Labor Statistics, while the overall labor force is expected to shrink, the female labor force is expected to grow twice as quickly as the male labor force through 2005. By that time, nearly two-thirds of all women will be employed and the female labor force will comprise nearly 50% of the entire workforce (Fullerton, Jr., 1995).

History suggests that traditional methods of recruitment and retention - including the provision of "female friendly" benefits (such as telecommuting, improved child care options, etc.)

- will not increase gender diversity within the IT workforce. Despite the high paying, challenging jobs that employers are eager to offer, many of this nation's most talented women simply are not interested. Few of them seek to enter the IT profession, and those that ultimately do are far more likely than their male colleagues to abandon it prior to retirement.

The question thus becomes, how can forward-thinking human resource organizations develop and nurture new and unique staffing strategies that will significantly increase the representation of women in their IT workforce and thus satisfy the long term staffing needs of their companies? We think that the answer to this question is marketing. In order to attract, recruit and retain women in IT - a field they have traditionally shunned - HR must expand its concept of itself and begin to think and act more like the marketing function. Ironically, devising and implementing an effective marketing strategy may be the most important role that HR can perform to respond effectively to the long-term challenges of the IT staffing crisis.

THE HUMAN RESOURCE MARKETING MODEL

Marketing essentially refers to any coordinated effort to communicate with and persuade customers to purchase and repurchase whatever product that you are trying to sell - whether it be a good, service or idea. It involves identifying potential customers for your product, determining the most effective ways to attract them, convincing them to buy your product, and ensuring that they are happy with their purchase so that they will not take their business elsewhere in the future.

Defining the Human Resource (HR) Marketing Strategy

The first step in the marketing approach is to define the HR marketing strategy. The marketing strategy should be designed to reinvent your company's recruitment and retention strategies for women IT professionals. Instead of "pushing" employment products on target customers through traditional staffing techniques, companies utilizing a marketing approach attempt to impact demand by "pulling" target customers toward their employment products. Companies that truly understand what prospective and long-term employment customers need and want, and consistently adjust their employment products to satisfy these desires, will reap employee customers who view their employment product as providing a fulfilling and socially satisfying "calling." Key to development of the HR marketing strategy is the correct identification of market segments and subsequent targeting to that group. Unfortunately, there is little tradition in the field of HRM to treat market segments differently. This may be due to the fact that professionals in the field are charged with creating systems that treat everyone as equal. However, when it comes to HR marketing, effective market segmentation is key for success. We propose that women in information technology is a market segment that deserves attention given

the current demographic trends and demands facing today's businesses. With that in mind, we move toward development of the HR marketing strategy.

A classic marketing strategy has four primary components - product, price, place and promotion. In the current context, "product" refers to the employer and job attributes that define an employment product (e.g., job content, job security, organizational culture and opportunities for professional growth, development and advancement, etc.). "Price" refers to the employee compensation and benefits policies and procedures that relate to the employment product. "Place" refers to the geographical bounds which define where the employment product is available. And "promotion" refers to the various techniques that an employer may use to communicate with the marketplace (e.g., advertising, college recruiting, events sponsorship, etc.). From the human resource management perspective, we suggest that you can consider product, price, and place simultaneously. To some extent, these components fit the traditional HRM domain more readily; however, promotion is a job that HRM has not embraced as readily. Our following discussion will, therefore, focus on components of product, price, and place that can specifically help you recruit and retain women IT professionals. And lastly, we will provide ideas for promotion that will help assure your efforts are successful.

Marketing the IT Product

Applying the marketing model to the employment context, the "product" to be sold is employment in your company (or your company's IT function). However, to apply the marketing model, employers must break free from conventional ways of thinking about human resources. For example, every HR professional worth his or her salt knows that "people" are a company's "most important asset," right? Wrong! In today's knowledge-intensive business environment, the view that employees are "assets" - even "important" ones - is an anachronism. It implies that employees are passive attributes that companies can control completely and manipulate as necessary (Price, 1996). In the severely oversupplied market for IT jobs, this view could not be further from the truth! By viewing employees and potential employees as customers of employment products, the marketing model recognizes that they have the power to select the employment product of a different supplier at any point in time (Price, 1996).

If we think of employees as assets, then we create systems to control their behavior. However, if we consider our employees (and potential employees) to be customers, then we work to create mutually beneficial exchange relationships with them. With the emergence of the so-called "new deal" between employers and employees, the competitive environment virtually requires that employees and potential employees be viewed as "customers." Corporate America has worked diligently to spread the word that job security is a thing of the past and that employees must consistently develop new skills and add value to their organizations to remain

employed. In return, employers generally promise to provide employees with challenging work and ample opportunities for career development. Employees apparently have heard the new deal message loud and clear. The outcome of this new paradigm is a classic example of the old adage “be careful what you wish for. . .”

Employees in the new deal era are the classic “tough” customers. Generally, they are stronger, more independent and more willing to take responsibility for their own job satisfaction than ever before (Towers Perrin, 1997). This is particularly true in the technology sector where there is a strong buyers market. Employers are finding that they must offer far more incentives than they have in the past to attract, recruit and retain the best and brightest IT professionals. Employers whose employment products fail to provide the desired challenges, opportunities and rewards are finding that their employee customers will not hesitate to take their business elsewhere (Towers Perrin, 1997). This is especially true now that the new deal essentially has nullified the social and professional stigma that was once associated with “job hopping” (Towers Perrin, 1997).

Like the new deal, the marketing model is premised on the concept of an exchange between employers and employees. However, unlike the new deal concept, which speaks in terms of broad generalizations, the marketing model requires a great deal of specificity to apply. There is no single “best practice” or method for applying the model. Each employer must define and execute a marketing strategy that is aligned with its unique business strategy and creates exchanges that satisfy its own needs and the needs of its targeted employee customers. Employers must sell this product in a labor market filled with competing employment products.

What differentiates the marketing model from traditional recruitment and retention strategies is the singular focus that it places on the role of the customer. The marketing model provides a framework for discerning and analyzing the opinions, attitudes and desires of different target customer groups. The model recognizes that different market segments have different needs and desires. In a labor market virtually overflowing with enticing employment products, employers must understand the complex web of rational and emotional triggers which influence purchasing decisions for each target customer group and use this information to predict and impact their purchasing behavior.

Understanding the “Whys”: Market Research

The first step in devising your marketing strategy is to understand why scores of the nation's most talented women are turning their backs on the IT profession at every stage in their professional development. Specifically, why do disproportionately low numbers of women choose to pursue undergraduate and graduate degrees in computer science and engineering?

And why do disproportionately high numbers of women who pursue careers in IT choose to abandon the profession prematurely?

So, why do disproportionately low numbers of women choose to pursue undergraduate and graduate degrees in computer science and engineering? A cursory review of available research reveals that women confront obstacles which subtly combine to dissuade them from pursuing careers in IT at every stage of their educational development. During grade school and high school, many girls and young women are shown to have low self esteem and believe they are not smart enough to take certain courses or pursue certain careers. It is also common for girls and young women to be discouraged from pursuing non-traditional careers by their families and teachers, who often operate with a subtle gender bias.

The lack of female role models and mentors seems to be the most critical problem. Most girls and young women are exposed to few, if any, female IT professionals who can serve as positive role models and mentors. Thus, many of them have a negative view of IT professionals and believe they are “geeky-nerdy individuals who wear bow ties, glasses, pocket protectors, pants that are too short and lab coats and who are typically bald males who are passive geniuses and work alone with their computers” (High Tech Workforce Resource Center, January 1998).

In light of these factors, it is no wonder why only about 4% of women plan to major in computer science or engineering by the time they enter college (National Center for Education Statistics, 1997). Faced with gender-specific obstacles throughout their undergraduate careers (including an overwhelmingly male enrollment and few, if any, female faculty members to serve as role models or mentors) - it is also no wonder why only about 1% of women ultimately graduate with degrees in computer science or engineering (US Department of Commerce, 1997). And finally, considering the fact that women who pursue graduate degrees in computer science and engineering will likely continue to confront these gender-specific obstacles - often even more intensely - it is no wonder why so few women choose to do so.

Not surprisingly, permutations of many of the gender-specific problems that women encounter during their education appear to continue throughout their professional careers. While a wide variety of personal and societal pressures combine to explain why disproportionately high numbers of women who pursue careers in IT choose to abandon the profession prematurely, a recurring theme is an unsupportive, male-dominated corporate culture. Many women who enter the IT profession often say that they are discouraged by the lack of female role models and mentors. They often feel excluded from the informal networks of communication where their male counterparts typically develop mentor and other important business relationships. They believe they often are overlooked for key projects due to gender stereotyping. They feel

distressed when their need to balance simultaneous career and family demands is not supported through flexible work policies. Finally, they feel disillusioned by the lack of women at the highest management and executive levels in their organizations, and by the fact that women in IT, on average, earn less than their male counterparts.

All of these factors combine to create a professional culture that generally has not supported the development and advancement of women. What makes the culture even more unappealing to women is that they often find the stereotypical image of the “geeky-nerdy” IT professional who is “more comfortable with a PC than a person” is all too often well-grounded in reality. Considering these attitudes and beliefs, it is no wonder why the attrition rate for women in IT is considerably higher for women than for men, and why women abandon the IT profession far more frequently than men.

Promotion: Creating a Compelling Marketing Message

Effective communication is at the heart of any successful marketing strategy. For your communication to be effective, you must have both a compelling marketing message and a creative way of reaching your customers with that message. Unless your employment product provides compelling benefits, can satisfy the deepest desires of customers, and is noticed and differentiated from your competition, your marketing strategy will not succeed. Many companies have learned this lesson recently as they have implemented a variety of female friendly benefits (e.g., flexible scheduling, telecommuting and improved child care options) in an effort to appeal to female employment customers. Since these best practices are increasingly common and easy to imitate, they do not constitute compelling benefits and cannot be a long-term source of a sustainable competitive advantage in the battle to attract, recruit and retain female IT professionals. In addition, many employers implemented these benefits in a very passive manner, thus diminishing the benefit that could have been incurred. How many companies communicated these benefits via e-mail or a direct mail campaign so that it looked like any other HR practice? In a labor market teeming with enticing employment products, employers must offer compelling benefits and communicate them in a way that helps their employment product to stand out from the crowd.

Your market research should provide you with clues as to what benefits each target customer group finds most compelling. This means that in addition to stressing mode of communication, an effective marketing campaign may have a different message delivery system for different market segments. Some customer groups will be more motivated by the rational (logical, factual) benefits that your employment product can provide (e.g., high compensation, job security, cutting edge technology, training and development opportunities, etc.). Others will be more motivated by the emotional (intuitive, values-based) benefits (e.g., control over time and

life, prestige, respect for diversity, meaningful work, welcoming and supportive work environment, etc.). In most cases, they will be motivated by some combination of rational and emotional triggers and you will need to pitch your marketing message toward both.

Selecting the Right Communication Vehicles

There are a variety of vehicles available to communicate your marketing message to customers. Some vehicles can relay your marketing message broadly to both current and potential employment customers, and others can be specifically tailored to reach particular target customer groups. There is no “best” communication vehicle or combination of vehicles. Instead, there are an infinite number of approaches that you can take to communicate with target customer groups. Each communication vehicle has advantages and disadvantages. To find the right vehicle or combination of vehicles to communicate your marketing message, you will need to think creatively and be willing to experiment with different approaches. Some of the more common marketing vehicles are described below.

Print Advertising. Print advertising is perhaps the most basic way you can communicate information to potential employment customers. You can advertise your employment product in many forums, from the “help-wanted” section of a mass-circulation newspaper to an industry trade magazine targeted toward female IT professionals. The beauty of print advertising is that you can choose forums that are specifically tailored to reach your target customer market and you can control completely the messages that you send.

Your recruitment ad is both a selling device which you can use to persuade women to take action (*i.e.*, apply for a position) and a hiring device that can be used to screen unqualified candidates (Bruce, 1998). The best ads should attract only candidates who are highly qualified and whose priorities are in line with those of the company (Bruce, 1998). They should be aesthetically pleasing and written in a way that responds to the needs and wants of your target customer and motivates them to take action (*i.e.*, apply for the job).

Publicity. Publicity refers to media coverage about your company and its employment product in public forums, including newspapers, magazines, television, trade journals and other information sources. Unlike advertising, your company does not pay directly for publicity. This means that publicity typically is considered a more credible form of information than advertising. It also means, however, that employers have little or no control over the messages that are sent to customers.

The best way to attract positive publicity is to design a premium employment product. Companies like IBM, Hewlett-Packard, Xerox and Motorola are proof positive that this premise is true. All of these companies repeatedly have been rated among Working Mother Magazine’s “100 Best Companies for Working Mothers” and have earned places in similar rankings in other

national magazines. They also have received a number of awards and a great deal of praise for their innovative initiatives in support of gender diversity from industry associations and the popular business press.

If your employment product is not getting any positive press, you may wish to retain a public relations (“PR”) professional to proactively help generate positive publicity. It is important to understand, however, that the best PR can do is reveal obvious truths about your employment product. It cannot create stories that are not grounded in reality or convince the media to cover stories that belie the facts. If your employment product is not worthy of positive press, or worse, is the unhappy recipient of negative press, you will need to do more than hire a PR professional to turn things around.

Word of Mouth. Word of mouth is perhaps the most powerful vehicle you can use to communicate information about your employment product to potential customers. Many companies assume they have no influence over customer word of mouth and thus fail to leverage this vehicle effectively. This is a huge and costly marketing mistake. Just ask General Electric Medical Systems.

Last year, GE Medical learned that while only 1% of candidates whose resumes were screened by the company were invited for an interview, a full 10% of candidates referred to the company by other employees were actually hired (Stewart, 1998). In light of this finding, GE Medical decided to focus on increasing the amount of employee referrals. By providing employees with gift certificates for every referral of a qualified candidate, and a couple of thousand dollars for each referral that results in a hire, GE Medical doubled the number of employee referrals in just one year (Stewart, 1998). It also saved a bundle of money. While every new hire attributable to an employee referral cost the company a couple of thousand dollars, it saved the company nearly ten times that amount in headhunter fees it otherwise would have had to pay (Stewart, 1998).

The GE Medical case demonstrates that when employees speak, prospective employees listen. But that’s not all. Prospective employees listen to other prospective employees as well. If you treat current or potential customers shabbily, chances are they will slam your product to their colleagues. Negative word of mouth is particularly dangerous on college campuses where news travels fast - especially bad news - and new customer turnover is about 25% per year.

While you cannot completely control word of mouth communication about your employment product, you can take steps to influence the direction it takes. To ensure positive word of mouth, offer a product that current customers are proud to be affiliated with (and refer to their colleagues) and potential customers hope to become affiliated with. If you offer a premium quality employment product, it will naturally generate positive word of mouth. Likewise, if you

treat your current and potential customers with the utmost respect at all times - they are likely to return the favor. If, on the other hand, you provide customers with an inferior employment product, or you treat them with disrespect - they are likely to return this favor too - in spades.

World Wide Web. The world wide web is one of the most versatile, cost-effective vehicles that an employer can use to communicate information about its employment product to potential employment customers. Companies communicate with potential employment customers primarily through their own corporate web sites and third-party recruitment sites. They also communicate with customers and potential customers through the advertisements they place on other web sites.

Recruiting on the web is becoming more popular every day. This vehicle has several advantages over traditional recruitment methods. To start, it provides access to a broad, technologically literate audience for a relatively modest cost (Greenberg, 1998). And like print advertisements, it permits you to choose forums that are specifically tailored to reach your target customer market. For instance, in addition to the various well-known third party recruitment sites which cater to all industries and professions (*e.g.*, the Monster Board), there are a number of sites that are specifically targeted to reach IT professionals generally, and female IT professionals in particular.

One of the primary benefits of using your corporate web site as a recruitment tool is that it provides you with complete control over the messages you send to potential customers. This means you have a great opportunity to be creative in distinguishing your employment product from the competition. Distinguishing yourself on the web is easier said than done. Most recruitment sites on corporate home pages are remarkably similar. They provide a description of the company, its products, people, culture and the available employment opportunities. A few go beyond these basics and address diversity initiatives that have been undertaken by the firm.

Very few companies have recruitment sites that actually grab the attention of the audience and prompt them to take action. One company that does is Cisco Systems, Inc. Visitors to Cisco's employment web site can submit their resumes and job applications directly to the company via E-mail. While many companies offer candidates this feature, Cisco positively distinguishes itself by inviting candidates to "make friends @ Cisco" by clicking on a box. Visitors who choose to provide their name and telephone number when prompted receive a phone call from a Cisco employee with a similar background who will serve as that person's "friend" throughout the hiring process (Greenberg, 1998). The friend system gives Cisco an opportunity to screen candidates informally and to make the recruiting process less stressful for candidates (Greenberg, 1998).

Another company that has distinguished itself on the web is Coopers & Lybrand LLP. Visitors to the C&L Strategic Selection Advantage Online web page can learn about the company and available IT positions. At the same time, C&L can learn a great deal about candidates by asking them to respond to a number of open-ended and multiple choice questions targeted to elicit competencies and cultural fit (Greenberg, 1998). Using web technology has enabled C&L to narrow the pool of unqualified applicants and focus its recruitment efforts on those candidates it finds most promising (Greenberg, 1998).

The world wide web appears to be the future of classified advertising. While the medium certainly has a great many benefits, and is improving all the time, there are some drawbacks. To start, attractive web ads are likely to attract a plethora of responses - many from unqualified candidates. You will need to invest in software and systems that can help screen out unqualified candidates and screen in top talent (Greenberg, 1998). In addition, your web site must be a knockout. In order to keep your customers' attention, your site must offer cutting edge technology, cool graphics and great editorial content. This means you will need to regularly monitor your site and update it often to keep it fresh.

Corporate Philanthropy. Historically, corporate philanthropy was not tied to business strategy in any way. Recently, however, forward-thinking companies have begun to use corporate philanthropy to gain a strategic advantage by tying corporate giving directly to business strategy (Smith, 1994). This "new" corporate philanthropy enables companies to support worthy social causes while at the same time advancing their own business goals (Smith, 1994). The causes that companies choose to support, and the breadth and depth of their support, speak volumes to customers and potential customers about their commitment to those causes.

Companies that are concerned about the IT staffing crisis, and in particular, the shrinking pipeline of qualified female IT professionals, can use targeted corporate philanthropy to make a powerful impact. There are numerous ways that corporate philanthropy can help to increase the representation of women in IT. These efforts are likely to enhance a company's name recognition among potential female employment customers and increase the satisfaction levels of current female employment customers.

One powerful way to appeal to current and potential female customers is to form strategic alliances with one of the many non-profit professional organizations that are dedicated to the advancement of women in IT. Some of the most well-known organizations include: Women In Technology International, The IEEE Committee on Women in Engineering, The Association of Computing Machinery Committee on Women in Computing, Computer Professionals for Social Responsibility, The Women in Engineering Program Advocates Network, The Association for

Women in Science, The Association for Women in Computing, and The CRA Committee on the Status of Women in Computer Science and Engineering.

While each of these organizations has a slightly different mission, their overriding goals are to provide women in IT with networking opportunities, social support and career guidance. They also are committed to increasing the representation of women in IT by serving as mentors and role models for girls and young women and making them aware of and prepared for the diverse and rewarding career opportunities available to women in IT.

In addition to financial support, companies can support these organizations by providing managerial advice, technological and communications assistance, among other things. Companies can also sponsor events organized by these organizations and provide them with employee volunteers, as necessary. Targeted events sponsorship and employee volunteerism are very high impact mechanisms for communicating with customers and potential customers.

Companies should encourage and support women in IT (especially women in influential positions) to become high profile role models for women at different stages in the IT education pipeline. Female IT professionals can volunteer to speak at schools, career forums, or industry seminars. They can serve as personal mentors for young girls or college students. They can work with teachers and guidance counselors to educate them about the various career alternatives available to women in IT. They can work with principals to help develop technology curricula in local schools. And so on and so on.

University Relations. Just as companies have begun to tie their corporate philanthropy efforts to business strategy, so too have they begun to tie their university relationships to business strategy. A number of forward-thinking companies have forged comprehensive “partnerships” with key universities as a way to address critical social and educational needs, such as the shortage of skilled IT professionals. These partnerships entail a host of centrally coordinated interactions between a company and the campus, including, recruiting, research, executive exchange, continuing education and curriculum development, among other things (Pollack, 1998).

A good example of a corporate/university partnership is the Spelman College Corporate Sponsorship Program. Spelman is a historically black women’s college located in Atlanta, Georgia. Nearly 40% of Spelman’s 1,961 students earn degrees in science, technology or engineering (Pollack, 1998). In recognition of this fact, more than 70 corporations have entered into partnerships with Spelman (Pollack, 1998). The partnerships are intended to “expose students and alumnae to corporate partners’ and “increase their probability of getting good jobs (Pollack, 1998).” In return for the mere chance to recruit from among this talented pool of women, corporate partners are required to make a gift to the college of at least \$50,000 (Pollack,

1998). They are also required to provide two permanent liaisons to the college and visit the campus two times each year (Pollack, 1998).

Companies that participate in the Spelman College Corporate Sponsorship Program, and other similar programs, communicate a very powerful message about the value they place on attracting and recruiting top notch female talent. They are saying that it is worth all the money. It is worth all the effort. It is worth all the time. When an employer sends such a strong message, it is very likely that current and potential female employment customers hear the message loud and clear.

Another aspect of university relations that communicates a great deal of information about your employment product to potential customers is your company's campus recruitment efforts. The campus recruiter, like the marketing representative, serves as a key point of contact with potential customers. His or her interpersonal skills (e.g., warmth, enthusiasm, empathy) and interviewing skills (e.g., ability to provide job information, listening skills) have a significant influence over the purchasing behaviors of employment customers (Maurer, et. al., 1992). Interestingly, however, while employers typically expend a fair amount of time and resources training sales personnel, they provide little, if any, training to campus recruiters regarding job marketing skills (Maurer, et. al., 1992).

In the oversupplied market for IT jobs, employers who are competing for scarce resources would be wise to import more rigor into their campus recruitment methods. Like traditional sales personnel, campus recruiters must be provided with the information, education and motivation necessary to enable them to market your company's employment product to students more effectively. Among other things, this means that they must understand your marketing strategy well and be able to respond to the needs and wants of each target customer group (which, for our purposes, means female undergraduate and graduate students). Successful support will translate into greater applicant acceptance rates and improved morale for your recruiters - which will likely raise applicant acceptance rates even further!

And Lastly, Think Beyond the HRM Department

You can only develop and retain an effective HR marketing campaign if the message you are communicating to current and potential employees is consistent with the message that you are communicating to your customers and to the general public. Each company must see itself in the "people relations" business. Does your advertising feature only men in technical jobs? Does your annual report show pictures of women IT employees as well as men? To what extent do press releases cover success in the employment, as well as customer and sales, areas? A more integrative approach to understanding a firm's total "people" marketing strategy is critical for tackling difficult problems such as the shortage of IT professionals. The entire brand

identification process must integrate not only customer and sales goals but employment goals. Development of a HR marketing model means that the human resource management department must get itself into the people management business, where people are employees and customers.

REFERENCES

- Fullerton, Jr., Howard N. 1995. "The 2005 Labor Force: Growing, but Slowly." *Monthly Labor Review*, 118 (11):29-44.
- Greenberg, Ross M., 1997. "Attention Grabbers." *Computerworld*, 31 (5): 73-76.
- Greenberg, Ruth. 1998. "Cast a Wider Net." *CIO Magazine*, 11 (6): 80-88.
- High Tech Workforce Resource Center*. 1998. "Building the 21st Century Information Technology Work Force: Underrepresented Groups in the Information Technology Workforce."
- High Tech Workforce Resource Center*. 1998. "From Myth to Reality: Changing the Image of Information Technology."
- Information Technology Association of America & Virginia Polytechnic Institute and State University*. 1998. "Help Wanted: A Call for Collaborative Action for the New Millennium."
- Maurer, Steven D., Howe, Vince, and Lee, Thomas. 1992. "Organizational Recruiting as Marketing Management: An Interdisciplinary Study of Engineering Graduates." *Personnel Psychology*, 45 (4): 807-833.
- Maurer, Steven D., Howe, Vince, and Lee, Thomas. 1992. "Organizational Recruiting as Marketing Management: An Interdisciplinary Study of Engineering Graduates." *Personnel Psychology*. 45 (4): 807-833, citing Rynes, SL and Boudreau, JW 1986. "College Recruiting in Large Organizations: Practice, Evaluation and Research Implications." *Personnel Psychology*, 39, 729-757.
- National Center for Education Statistics*. 1997. "Findings from The Condition of Education 1997: Women in Mathematics and Science."
- Pollack, Rachel. 1998. "Give & Take." *New Directions in Corporate Giving*.
- Price, David. 1996. "How Marketing Can Sell Your Personnel Product." *People Management*, 2 (12): 21.
- Smith, Craig. 1994. "The New Corporate Philanthropy." *Harvard Business Review*, 72 (3): 105-114.
- Stewart, Thomas A. 1998. "In Search of Elusive Tech Workers." *Fortune Magazine*, 137 (3): 171-172.
- Towers Perrin, Monitor*. 1997. "Workplace Index: Employees' Emerging Agenda."
- U.S. Department of Commerce, Office of Technology Policy*. 1997. "America's New Deficit: The Shortage of Information Technology Workers."
- U.S. Department of Commerce, Office of Technology Policy*. 1998. "Update, America's New Deficit."