What do these workers have in common: aircraft systems maintenance technicians, computer engineers, holders of a master of science in physics-entrepreneurship track, customer service representatives engaged in electronic customer relationship management, and older workers. They are all considered gold-collar workers, by one commentator or another. This Digest reviews the characteristics of gold-collar workers and identifies implications of those characteristics for employers and educators.

**WHAT IS A GOLD-COLLAR WORKER?**
A Higher Level of Knowledge Work. Kelley (1990) described an old distinction that divided the work force into blue-collar and white-collar workers. Blue-collar workers typically did manual labor in a factory for hourly pay, whereas white-collar workers did knowledge work in an office on salary. However, changes in the nature of work and the workplace have led to large growth in the numbers of a particular kind of knowledge worker—the gold-collar worker, whose most valuable assets are problem-solving abilities, creativity, talent, and intelligence; who performs nonrepetitive and complex work that is difficult to evaluate; and who prefers self-management. The gold-collar worker is, for example, the computer engineer as opposed to a lower-level knowledge worker such as an input operator. Kelley pointed out that even though the name is new, there have always been gold-collar workers like designers, researchers, analysts, engineers, and lawyers.

Learning, Teams, and Strategic Thinking. Wood (2001) characterized gold-collar workers in information technology (IT) similarly by focusing on qualitative matters. Gold-collar IT workers learn continually from experience. They recognize the synergy of teams and can demonstrate leadership; they are strategic thinkers who see the big picture and can change strategic directions when necessary. They have a portable, flexible skill base relevant to a variety of work environments and maintain that skill base through their own personal development, with well-connected networks of contacts at the leading edge.

Interdisciplinary Knowledge. Where business and science intersect, the basic focus of the gold-collar worker is interdisciplinary knowledge and experience (Bartlett 1998; Todaro 2001; Van Nierop and Bow 1997). This interdisciplinary focus combines scientific or other technical knowledge and skills with business literacy to result in a gold-collar worker with expertise across several areas. Gold-collar engineers, chemists, biologists, physicists, or geoscientists understand the relationship between their scientific discipline and business, have the management and financial knowledge needed for a business environment, and can "marry" science and entrepreneurship.

Other Characterizations. Roe (2001) called the gold-collar worker "a highly skilled multidisciplinarian who combines the mind of the white-collar worker with the hands of the blue-collar employee" (p. 32); examples include aircraft systems maintenance technicians, network administrators, and advanced manufacturing technicians. A similar case would be online customer service representatives (CSRs), for whom managing customer relationships now involves not only oral communication but also text-based Internet chat and e-mail about tough questions not answered in frequently asked questions or canned e-mail responses (Dicksteen 2001). Others describe gold-collar workers as those in high-skill, high-wage, high-demand occupations that require less than a bachelor's degree—for example, chemical process industry (CPI) operators and technicians (Shanley and Crabb 1999); or electrical power line installers, telephone and cable TV installers, plumbers, pipe fitters, and electricians (Raffaele 2001). Some consider older workers, with their irreplaceable fund of knowledge and experience, to be the gold-collar work force ("Gold-Collar Workers" 2001).
What Do They Share? Although those characterizations are different, they share some common themes:

* For gold-collar workers, knowledge is not just having information; it is using information--to solve problems, to create solutions and strategies, to learn from experience.

* Gold-collar workers typically use knowledge from more than one area. In some cases, gold-collar knowledge crosses formal, academic disciplines like science and business; in others, occupationally specific technical knowledge is used in combination with more general process, communication, and learning-to-learn skills.

* Gold-collar workers tend to be autonomous. Traditional gold-collar professionals (engineers, lawyers) have always enjoyed a high degree of autonomy. With the disappearance of much middle management, newer gold-collar workers like online CSRs and CPI operators, formerly considered skilled trades, often perform work once done by degreed professionals.

* Gold-collar workers tend to work in traditionally male occupations like engineering, law, or IT. Traditionally female occupations involving comparable knowledge work (e.g., nursing or teaching) don't receive the accolade "gold collar."

* However they are characterized, gold-collar workers are in great demand. Whether a top Visual Basic programmer in IT, a physicist with an MBA, or a 60-year-old who chooses to cut back rather than retire, gold-collar workers are sought, recruited, and hired--sometimes so eagerly that they can write their own ticket.

**IMPLICATIONS FOR EMPLOYERS AND EDUCATORS**

The characteristics of gold-collar workers, coupled with the great demand for them, raise human resource development issues for employers (Holland, Hecker, and Steen 2002). Appropriate organizational policy and structures are needed to manage, recruit,
and retain gold-collar workers; in addition, both employers and educators may need to reorient traditional thinking to educate and increase the pool of gold-collar workers.

*Managing Gold-Collar Workers*

According to Peter F. Drucker (cited in Bunk 1999), knowledge is the principal resource of the 21st century, and knowledge is fundamentally different from the traditional resources of labor, raw materials, or capital. Unlike information, which can be computer generated, knowledge is in the minds of workers and arises from their own cognition and insight; knowledge workers own the primary tool of their own work and can take that tool with them if they change jobs. That knowledge is dynamic, and the goal of management should be enhancing, exchanging, and using it effectively rather than preserving and systematizing it like a static resource. A more productive approach to managing gold-collar workers includes concentrating on end results by setting goals rather than controlling the processes involved. Goals provide guidance and help ensure that workers don't stray too far into the details of bench work, for example. At the same time, they can allow the leeway and flexibility necessary for exploring and tinkering, from which new solutions, new strategies, and new learning result. Managers should use their own judgment to determine when and if more detailed plans and regular updates to monitor progress are needed.

In particular, managers must recognize that the scientific management theories and tools to handle unskilled, Industrial Age, assembly-line workers are not appropriate for the nonrepetitive and complex work activities of gold-collar workers (Kelley 1990). The planning, scheduling, and quality control necessary to monitor progress should be a cross-functional team effort among all workers involved; written progress reports should be kept to a minimum and replaced insofar as possible by brief onsite meetings, one on one or with the work team as a whole. Time management techniques should allow workers to focus both on important and urgent tasks as well as on the important but often less urgent major knowledge tasks of the team; uninterrupted periods of concentration should be preserved. To minimize or avoid the ego problems sometimes experienced with talented workers, groups can set norms for social behavior, allowing somewhat greater latitude for emotions and behavior. Individual work and contributions should receive regular recognition--and at the same time, constructive criticism must be sought, accepted, and used. Power struggles over turf can be avoided by challenging assignments to stretch individual abilities, team rather than independent work, and rewards for group performance in addition to individual performance. Managers can bend organizational rules, allowing departures from the letter of the rule in favor of performance and results that accomplish the spirit of the rule. Put another way (Curtin 1995), gold-collar workers want a transformational leader who has charisma, who represents an ideal they can assimilate and adopt, and who provides the stimulation and individualized consideration they need to become more than they were.
Recruiting and Retaining Gold-Collar Workers

Writing before the economic downturn of 2000-01, Munk (1998) contrasted William H. Whyte's Organization Man, under the old employment contract of "loyalty in exchange for lifetime employment and a gold watch" (p. 68), with younger gold-collar workers who are "educated, smart, creative, computer literate, equipped with portable skills--and demanding" (p. 64) and who view work "as a hobby that you happen to get paid for" (p. 65). Although hardly indifferent to financial compensation, the new Organization Man--and Woman--are more concerned with nonfinancial rewards and benefits in the workplace, such as a casual and informal work environment, flexible work schedules to accommodate their personal lives, and even part- or full-time telecommuting; they're more likely to want to bring their pet to work and less likely to be interested in onsite child care, 401(k)s, and retirement plans. Perhaps most important, the portability of their skills and the widespread demand for them often allow them to be opportunistic. To be competitive, employers often must offer significant signing bonuses and high starting salaries to recruit such gold-collar workers--and large raises on demand to retain them in the face of other job offers. Whether or not the expectations of such gold-collar workers might change in a tighter job market is open to question.

Increasing the Pool of Gold-Collar Workers

Many commentators have voiced concerns about current shortages of gold-collar workers and about forecasts of even greater need for them in the future. Shortages may, in part, be attributed to stereotypical thinking based on superficial, outward characteristics--race, ethnic background, gender, and dress, for example (Sadler 1994). Women are underrepresented in many gold-collar areas, particularly IT (Yelland 2001), and in other traditionally male occupations like CPI operators; minorities are often overlooked as well (Shanley and Crabb 1999). Likewise, bachelor's degree holders, often unable to find work in their fields and forced into low-pay, low-skill service jobs, should be considered as promising candidates for an operator's position, not as deficient or unambitious (ibid.). Older workers, otherwise on the verge of retirement, should not be overlooked; not only are they an increasing proportion of the population, they also represent a valuable source of wisdom and experience ("Gold-Collar Workers" 2001). Educating Gold-Collar Workers

Training new workers and retraining older adults should be part of a work force development system integrating initial education, postsecondary education, and ongoing training throughout life (Raffaele 2001). Traditional bachelor's and graduate degree programs may need to expand their focus beyond a single academic discipline and should help students acquire skills not typically covered in academic programs,
such as communication skills for a nonspecialist audience and the economics of high-technology operations (Todaro 2001). And new models of delivery may be essential for a 21st-century gold-collar work force--for example, web-based distance education developed and delivered by a partnership combining technical support and subject-matter expertise (Michigan Virtual Automotive College n.d.).

To sum up ... The multiskilled, knowledge-based, gold-collar worker, using information to solve problems and create solutions, is highly valued and likely to become even more so. Employers and educators need new ways to manage, recruit, retain, and educate them.

REFERENCES

Bunk, S. "How to Manage Knowledge and ‘Gold Collar Workers.'" THE SCIENTIST 13, no. 3 (February 1, 1999): 16-17.


Dicksteen, L. N. "‘Gold Collar’ CSRs." CATALOG AGE 18, no. 7 (June 2001): 141-142.


Sadler, P. "Gold Collar Workers: What Makes Them Play at Their Best?" PERSONNEL


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