United States General Accounting Office

GAO

Report to the Chairman, Subcommittee on 21st Century Competitiveness, Committee on Education and the Workforce, House of Representatives

September 2001

REGISTERED APPRENTICESHIPS

Labor Could Do More to Expand to Other Occupations

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GAO-01-940

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Abbreviations

AIMS	Apprenticeship Information Management System
ATELS	Office of Apprenticeship Training, Employer and Labor Services
CompTIA	Computing Technology Industry Association
IBEW	International Brotherhood of Electrical Workers
IT	information technology

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United States General Accounting Office
Washington, DC 20548

September 7, 2001

The Honorable Howard P. McKeon
Chairman, Subcommittee on 21st Century Competitiveness
Committee on Education and the Workforce
House of Representatives

Dear Mr. Chairman:

In recent years, employers in some industries have faced challenges obtaining workers with specific skills. At the same time, many workers have not mastered the skills that are most in demand in the labor market. One approach to addressing this mismatch between labor demand and supply—the apprenticeship model—has been used for decades in construction trades and some manufacturing occupations to ensure that workers have the skills employers need. Apprenticeship combines supervised on-the-job training with formal instruction. It benefits both employers and employees by providing the skills and knowledge necessary for a specific job and a credential recognized throughout an industry. Apprenticeship programs typically last from one to several years and are sponsored by employers who pay an apprentice's wages; the employer or the apprentice may fund the formal instruction. The use of apprenticeship is standard practice in some industries, but expansion beyond occupations not traditionally apprenticed has been limited.

To promote the apprenticeship model and safeguard the welfare of apprentices, the Department of Labor established the federal registered apprenticeship program, in which more than 360,000 apprentices are currently enrolled. Labor determines whether occupations in which employers want to sponsor apprentices should be approved as apprenticeable. Employers, sometimes with the help of unions and other employee groups, can establish and operate programs in those approved occupations. Labor or representatives of state apprenticeship councils designated by Labor promote the apprenticeship concept and must approve individual programs for them to be part of the federal registered apprenticeship program.

To address your concern that apprenticeship is not being used as much as it could be to develop a skilled workforce, you asked us to (1) describe efforts Labor has made to expand apprenticeship to new occupations and explain some of the impediments to getting apprenticeship programs established in fields not traditionally apprenticed, and (2) describe examples of apprenticeship programs that responded to current labor

market needs and how they have done so. To answer your questions, we spoke with Labor officials at headquarters and regional offices about their efforts to promote the apprenticeship program. We also interviewed federal and state employees in four states—California, Indiana, Massachusetts, and New Jersey—who promote and register apprenticeship programs. We analyzed the approval process for 40 new programs in these four states and identified and obtained more detailed information on challenges faced by six programs in occupations not traditionally apprenticed. We also spoke with experts and employer and employee group representatives about how apprenticeship meets labor market needs. Our work was conducted in accordance with generally accepted government auditing standards between November 2000 and July 2001. See appendix I for a full discussion of our scope and methodology.

Results in Brief

Labor has not systematically identified new occupations suitable for apprenticeship programs that could respond to needs for skilled labor, nor has it successfully alleviated concerns of some employers about the requirements of apprenticeship, resulting in slow expansion of apprenticeship to new occupations. While the apprenticeship model is not appropriate for all occupations, it can fill an essential need for developing certain skills in workers. In the last 5 years, Labor has approved 19 new occupations as apprenticeable and a substantial number of these have been in less traditional occupations. For example, internetworking technician and youth development practitioner were both approved in 2000. However, these approvals have usually been initiated by employers' requests for apprenticeships, not as a result of Labor's initiative. Labor does not systematically review occupations and related labor market data to identify occupations with labor needs that would be suitable for apprenticeships. Further, some employers' apprehension about program requirements, and Labor's inability to alleviate this apprehension, have been an impediment to getting apprenticeships established in occupations not traditionally apprenticed. Employers expressed a range of concerns that made them wary of apprenticeship programs. For example, some employers were reluctant to commit to incremental increases in wages as required by apprenticeship regulations. Labor and state apprenticeship council representatives often meet with individual employers to address these concerns and explain how apprenticeship works, which helps employers overcome their uncertainties. However, there is no national information-sharing mechanism to help employers learn from others who have established similar programs. In addition, Labor's apprenticeship database is incompatible with some states' systems; as a result, the agency is unable to measure its progress in expanding apprenticeship and cannot readily identify and share its successes with potential sponsors.

We identified several apprenticeship programs in which apprenticeship training helped to develop workers with particular skills sought by industry. The six examples of apprenticeship programs we examined—all established to respond to employers' needs for skilled labor—range from those in industries that have had apprenticeships in the past, such as construction-related occupations, to those in occupations not traditionally apprenticed, such as youth development practitioners who advise youth on training and employment. These programs overcame many of the impediments that employers had identified as reasons for their reluctance to establish apprenticeship programs. Key to the establishment of several programs was the close interaction between employers and federal or state apprenticeship officials to ensure that employers understood the value of apprenticeships. Typically, apprenticeship representatives who developed the program, including apprenticeship staff and union representatives in some instances, fostered good communication early in the process that identified and resolved concerns among all parties, such as unions and employers. In addition, coordination with other federal and state workforce development efforts to obtain necessary resources was important to getting these programs established.

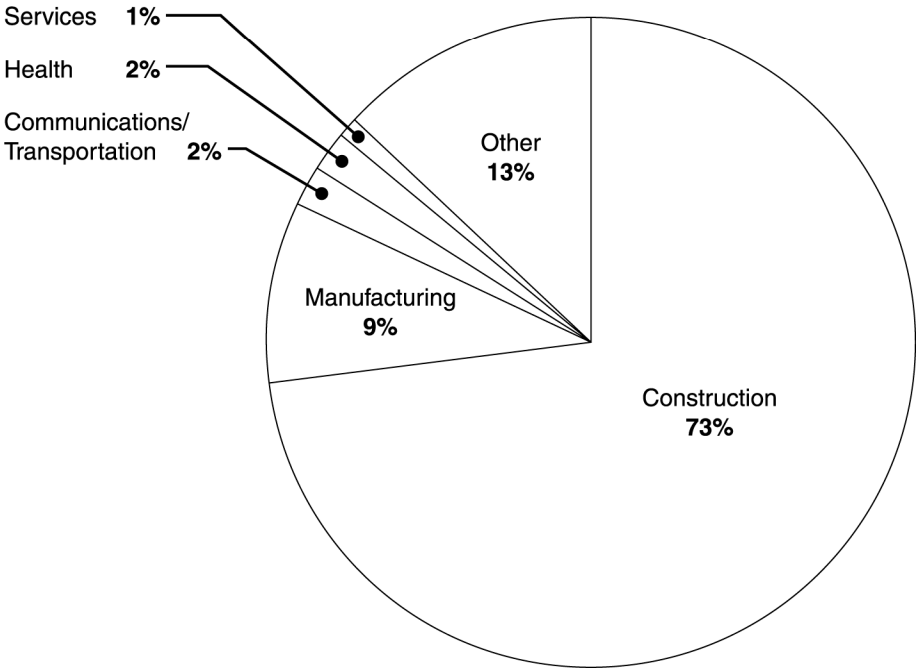
We are making recommendations to the Secretary of Labor to help the agency expand the use of apprenticeships in occupations not traditionally apprenticed and improve the apprenticeship program data system. Labor was provided a draft of this report and concurred with our recommendations.

Background

Apprenticeship is an employee training approach that combines on-the-job training and formal instruction to teach workers the practical and theoretical aspects of a skilled occupation. It is appropriate for many occupations that require at least 1 year of hands-on training and formal instruction. Apprentices work under the auspices of a mentor who is a fully trained worker, often called a journey worker. The content and length of the apprenticeship training and instruction are determined by the needs of the specific occupation. For employers, apprenticeship helps ensure that workers learn consistent skills, practices, and safety procedures. It also can be a way to retain employees because it indicates an employer's willingness to invest in the worker and ensures regular wage increases if skills are attained. Additionally, employers are permitted to pay apprentices in a registered program less than prevailing wages while they are working on a federal construction project. At least two states and municipalities have similar requirements or mandate that contractors employ apprentices on projects. Employees benefit from registered apprenticeship by advancing their skills and obtaining a credential

recognized throughout an industry. Apprenticed occupations have historically been concentrated in the building trades, metalworking trades, and various repair occupations, as we described in an earlier report.[1] Figure 1 shows the apprentices as of September 30, 2000, for 36 states that provided data on apprentices by industry. Construction and manufacturing apprentices continue to make up the vast majority—82 percent—of apprentices.

Figure 1: Registered Apprentices by Industry as of September 30, 2000, for 36 Reporting States



Source: U.S. Department of Labor

The National Apprenticeship Act of 1937, commonly known as the Fitzgerald Act (29 U.S.C. 50), authorized and directed the Secretary of Labor to formulate and promote labor standards safeguarding the welfare of apprentices and to bring employers and labor together to establish programs of apprenticeship. The Secretary issued regulations

[1]See *Apprenticeship Training: Administration, Use, and Equal Opportunity* (GAO/HRD-92-43, Mar. 4, 1992).

implementing the act which provide for registration of apprenticeship programs. In order to be registered, Labor requires that an apprenticeship program be in an apprenticeable occupation as defined in the regulation and meet certain standards. Programs are administered by the Department of Labor Office of Apprenticeship Training, Employer and Labor Services (ATELS)[2] or by State Apprenticeship Agencies or Councils[3] recognized by the Secretary of Labor.

The standards prescribed by Labor require that federal registered apprenticeships must include at least 1 year or 2,000 hours of on-the-job training and a recommended 144 hours of formal instruction. In general, most programs last 3 to 4 years. Each program must meet 20 additional requirements, which include a specified minimum age for an apprentice, a specified term of apprenticeship, a progressively increasing wage schedule based on skills acquired, safety training, and a minimum ratio of apprentices to skilled workers. States can impose additional requirements on programs. Program sponsors may also identify additional minimum qualifications that apprentices must possess—for example, a certain level of education or specific physical abilities needed to perform essential functions of the occupation.

In addition to meeting the prescribed labor standards, an apprenticeship program must be in an apprenticeable occupation to be eligible for registration. Labor makes this determination based on criteria outlined in the regulations. Labor can make this determination when a program is presented for registration or before apprenticeship programs are developed. In the latter situation, for example, an employer may submit a list of the skills needed to complete various tasks in an occupation and the necessary training to complete these tasks. Typically, Labor then distributes this list to appropriate industry representatives for feedback on the occupation's apprenticeability. Once Labor has determined that an occupation is apprenticeable, it notifies federal and state apprenticeship representatives who can begin to promote programs within that occupation. If an employer decides to establish an apprenticeship program, he or she can work with an apprenticeship representative, either from Labor or a state council, to ensure that the program complies with

[2]The regulations specify the Bureau of Apprenticeship and Training; however, under a recent reorganization, responsibility for administration of the program was assigned to ATELS, which includes the Bureau of Apprenticeship and Training.

[3]In 23 states, Labor administers the federal registered apprenticeship program; in 27 states, Puerto Rico, the Virgin Islands, and the District of Columbia, state apprenticeship councils administer the program.

Labor's standards and state laws. Frequently, the apprenticeship representative will help the employer by suggesting various program practices, providing examples of programs that have been successful, or modifying the requirements to meet the needs of individual employers. Employers can sponsor registered apprenticeship programs independently, with a group of employers, or with organized labor.

Despite having an important presence in industry, the federally registered apprenticeship program operates using relatively little federal money. In fiscal year 2001, ATELS has an appropriation of about $22 million to administer the program, while state councils run the program with an additional $20 million.[4] The employers and apprentices themselves contribute at least $1 billion for the training. According to Labor, more than 37,000 apprenticeship programs in about 850 occupations employed about 360,500 registered apprentices in fiscal year 2000.

Lack of Systematic Identification of Occupations and the Need to Allay Employers' Concerns Slow Expansion of Apprenticeships

Progress in expanding apprenticeships to address skill needs in occupations not traditionally apprenticed has been hampered because Labor's efforts to identify new apprenticeable occupations are not systematic, nor has Labor been able to alleviate some employers' apprehension about program requirements. Instead of proactively identifying occupations in which apprenticeship could help provide needed skills, Labor has reacted to employers' requests to have their occupations recognized as apprenticeable. While some employers take the initiative to make this request, others are deterred from doing so by their apprehension about apprenticeship. Employer concerns that have impeded the establishment of apprenticeship programs ranged from stringent program requirements to the increased government scrutiny they may invite. Apprenticeship representatives working one-on-one with employers try to allay these concerns; however, Labor does not have a centralized effort to reach out to industry representatives and explain how apprenticeship could be implemented in their industry. Further, Labor cannot identify and share its successes because it cannot fully assess its progress in establishing new programs. Its apprenticeship database is incompatible with states' systems, resulting in data that are incomplete and too general to provide information on specific occupations' expansion.

[4]An estimate provided by National Association of State and Territorial Apprenticeship Directors.

Labor Lacks a Systematic Process to Expand Apprenticeship

Labor does not have a formal process to determine how the apprenticeship program could be expanded to meet an increasing demand for skilled labor or to respond to the technological advances of today's economy. Labor has primarily reacted to employers' requests for apprenticeships in new occupations and has allowed industry to take the lead in requesting new occupations. Further, Labor has not made a comprehensive effort to locate funding for all new apprenticeable occupations; however, it has recently recognized several occupations that respond to evolving labor market needs. In March 2000, at the request of a union, it approved internetworking technician as an apprenticeable occupation to respond to the increased need for skilled workers to install, maintain, and operate advanced data networks and their components. In October 1999, Labor approved Hotel Associate as an apprenticeable occupation to respond to increased labor needs in the tourism industry and to help retain workers in a competitive labor market. In a few cases, Labor has been proactive in identifying specific occupations, providing funding for their development, and encouraging their implementation. For example, in the late 1990s, Labor initiated (and approved in 2000) the youth development practitioner apprenticeship to provide quality training for workers who deliver comprehensive services to young people and provided grants for its implementation. In the last 5 years, 19 occupations have been recognized by Labor as apprenticeable and a substantial number of these have been in less traditional occupations. Table 1 lists the occupations and approval dates for these occupations.

Table 1: Occupations Recognized as Apprenticeable, 1996–2000

Occupation	Approved
Safety inspector/technician	1997
Production technologist	1997
Fence erector	1998
Residential wirer	1998
Production finisher	1998
Fish hatchery worker	1998
Coating machine operator I	1998
Mold designer (plastics industry)	1998
Mine inspector (government) (metal-nonmetal)	1998
Mine inspector (government) (coal)	1998
Construction driver	1999
Calibrator (military)	1999
Office manager/administrative services	1999
Undercar specialist	1999
Hotel associate	1999
Electrostatic powder coating technician	1999
Industrial machine systems technician	2000
Internetworking technician	2000
Youth development practitioner	2000

Source: U.S. Department of Labor

Labor officials recognize the need for Labor to become more proactive in identifying new occupations as apprenticeable and providing funds for the development of new apprenticeship programs but, according to the officials, Labor's efforts in this area have been hindered by resource limitations. Specifically, Labor officials commented that staff and funding shortages have prevented the agency from fully addressing all its responsibilities, including marketing apprenticeship programs, coordinating with other partners in the job training arena, and providing technical assistance to employers. However, despite their funding limitations, Labor has been able to make some progress in developing and expanding the apprenticeship program. Further, information to help them identify additional occupations in which more skilled workers are needed and apprenticeship can effectively be used to train workers is readily available. Future plans call for taking a more systematic approach, especially in assessing the labor needs of occupations and determining the possibility of apprenticeships helping to address these needs.

Employer Perceptions Present Challenges to Expanding Apprenticeships

Some employers' perceptions and concerns about the apprenticeship program have presented challenges to expanding the program. In our discussions with apprenticeship representatives and employers from the states we visited, we were told that employers were apprehensive about agreeing to a progressive wage schedule for an apprentice without first receiving feedback on how the apprentice was performing both on the job and during formal instruction. Employers were reluctant to commit to a program lasting several years, especially in view of uncertain economic conditions and rapidly changing technology. Employers were concerned with what they considered strict training requirements, such as the 144 hours of formal instruction, recommended by federal regulation but required by some states. Employers were also concerned about getting involved in a program that they thought would lead to increased government oversight or scrutiny of their business. Additionally, employers regarded apprenticeship as a "blue collar" approach to training that is inappropriate to their industry.

Employers in some industries, such as high technology and biotechnology, have difficulty envisioning how apprenticeship would benefit them. Apprenticeship officials in several states commented that they have tried to reach out to these industries but have not been successful because employers see difficulty incorporating the apprenticeship structure within their industry. The computer-generated imaging industry in California is an example of an unsuccessful attempt to reach out to an industry by the state apprenticeship representatives. The need for animators to create computer-generated graphics has greatly increased, but is largely project-driven. Workers are needed for a short period of time and then are laid off when the project ends, which is not conducive to long-term apprenticeships. State officials suggested that studios adopt the construction trade model, where workers are essentially pooled and employers draw from the pool as needed. Employer reaction was strongly against this model because the motion picture industry did not want to share workers; the proprietary nature of the work, with companies operating in very competitive fields with new technology, made them uneasy.

Labor has efforts under way to reach out to individual employers as well as to inform the general public about apprenticeship. In developing individual apprenticeship programs, Labor deals with employers on a one-on-one basis. Although costly, time-consuming, and labor intensive, Labor officials commented that this approach is very effective at allaying the fears and concerns of employers regarding apprenticeship and was instrumental in gaining their support. Many apprenticeship representatives from Labor are former apprentices who are knowledgeable about the

program and can relate to employer concerns. Their approach is to meet with employers to explain the details of the program and resolve any concerns the employer raises. For example, in response to concerns about wage progression, apprenticeship representatives might explain the need to increase workers' pay over time, noting that this is not automatic but rather based on a demonstrated increase in skills. To allay concerns about the long-term nature of apprenticeship training, they might describe how the program provides flexibility in determining the length of the program. Some programs such as the cable television installer apprenticeship are 1-year programs whereas more complex apprenticeships would be longer, for example, 4 years for a carpenter or electrician apprenticeship. When an employer expresses concern about increased governmental scrutiny, the representative might explain that oversight would not include reviewing other aspects of the operations. Officials commented that once employers fully understand the reasons for apprenticeship requirements, they are often supportive of apprenticeship and can see the benefit to both themselves and the employee.

Additionally, Labor has begun an initiative using its current resources to better market apprenticeship. In October 2000 Labor started the Registered Apprenticeship Awareness Initiative, which consisted of a variety of efforts aimed at increasing awareness of and support for registered apprenticeship beyond the employers. For example, Labor produced a compact disc to help spread information about apprenticeships to employers and potential apprentices. It includes information on how to contact apprenticeship representatives, what resources are available to help set up a program, and the benefits of a program. Labor has found this to be a way to conduct outreach, within their present resources, to a broad segment of employers and potential apprentices.

Labor's Inadequate Information System Prevents Measuring Progress and Sharing Information

The Apprenticeship Information Management System (AIMS), Labor's current apprenticeship information system, cannot provide a complete, detailed picture of progress in implementing apprenticeships in new fields and cannot be used to assess progress or program development. Apprenticeship officials in 36 states enter data directly into AIMS but the remaining 14 states—which have a labor force of 49 million, or 35 percent of the total U.S. labor force—have chosen not to directly report data to the system, do not have access to it, and in some cases provide only summary data. Detailed information is not included in AIMS for these states, and some information, such as programs being developed, is not included for any states. The system was developed to provide Labor with capabilities to report statistical information and track apprenticeship registration, not to

manage the program. Labor hopes that a new system under development will be used by all states so that it can provide information with which to measure progress in expanding apprenticeships to new occupations. Labor has developed specifications for a state-of-the-art AIMS system that can be used by headquarters, regions, and all states. The new system is expected to provide detailed information, such as data on apprentices who start, complete, or leave the program. The new system is expected to be designed by February 2002 and to be operational by June 2002.

Labor lacks a mechanism to share information among all states, which could be helpful as Labor tries to expand apprenticeships to less-traditionally apprenticed occupations. Labor does not maintain a national information-sharing system that provides information on lessons learned and experiences with these apprenticeships. This lack precludes states from quickly learning of and benefiting from the experiences of others. For example, two states we visited were each working independently to develop potential apprenticeships within the information technology (IT) industry. They were unaware of similar efforts by the other or by Labor nationally. Both were unable to benefit from the other's experiences, and neither was successful in getting an IT-related apprenticeship started. Neither could readily access national information on other states' progress or success at similar efforts. According to Labor officials, such information is not readily available. Labor officials believe that their system should have more capabilities, such as on-line queries, that would enable this information to be obtained readily. The data gaps and insufficient capability of the AIMS system further reduce the value of information that is obtainable on the system.

Some Apprenticeship Programs That Respond to Current Labor Needs Have Overcome Impediments

We identified a diverse group of programs for which apprenticeship was chosen as an approach to developing skills needed by an industry. The people involved in establishing these programs overcame difficulties in order to set up apprenticeship programs. While the programs were at various stages of maturity at the time of our study, none had developed quickly; they required much discussion and negotiation among different parties, and in a few cases their development is still under way. Generally, the start-up effort required additional resources, sometimes provided by employers and sometimes by Labor. Program sponsors frequently used innovative practices, such as on-line training, to respond to the special characteristics of individual programs.

As shown in table 2, the programs we studied represent a variety of industries and meet particular labor skill needs. Most of these programs were started in the last decade, and a few are still being established. More

recent efforts to establish apprenticeships in new occupations have involved reaching out to industries in which apprenticeship is not a familiar concept and developing a comfort level among potential sponsors and apprentices. (See app. II for detailed descriptions of the development and status of each program.)

Table 2: Apprenticeship Programs Analyzed

Occupation and location of program(s) reviewed	Description	Labor need/objective	Approved	Status
Sound and communication systems installer, northern California	Install low-voltage systems, such as remote controls, burglar and fire alarms, data and telephone lines, and audio and video systems	The union realized the need for skills outside the "electrician" occupation to respond to increased work on low-voltage systems.	1987	Began operating in 1993 in northern California. About 1,100 apprentices enrolled and 650 have completed the program as of June 2001.
Production technologist, Shreveport, La., and Denver, Colo.	Manufacturing workers responsible for direct production (for example, assembling products and setting up machines) and indirect production (for example, managing materials and maintaining equipment)	The employer wanted manufacturing workers to be more responsive to customer needs and developed a new occupation title to bridge existing occupations.	1997	Eight apprentices are in the program. Apprentices' skills have been found to be helpful, but instability in ownership of the employing company has made expansion difficult.
Childcare development specialist, Indiana, New Hampshire, and Vermont	Provide direct care to children in a center or home setting	This is part of a federal initiative to raise skills of childcare workers throughout the United States to meet a recognized lack of skilled workers and low pay for the profession.	1981[a]	A major effort to implement this program began in the late 1990s. Programs have been established or are being established in at least 21 states and the District of Columbia, with over 500 apprentices registered.
Youth development practitioner, Alaska	Provide employment-related services to youth; for example, assess youth job readiness, assist with job searches, and maintain youth case records	This is a federal initiative to develop workers able to counsel youth on employment and other issues.	2000	Apprenticeships are being established at several local and national organizations and entities. Labor has provided some grants for implementation.
Pharmacy technician, Maine and Washington, D.C.	Under supervision, technicians fill orders for unit doses and prepackaged pharmaceuticals and perform other duties, for example, recording drug deliveries and storing merchandise	Employers recognized a need for more skilled workers and better retention of these workers.	1980[a]	The program is newly established at a few locations with plans to market the program elsewhere.

Occupation and location of program(s) reviewed	Description	Labor need/objective	Approved	Status
IT technical support specialist, national	This program is still being defined, but it is expected to fill the need for many entry-level workers in IT technical support--for example, help desk specialist, network technician, and web developer	The IT industry association perceives a need for "hands-on" skills to accompany industry certifications and fill labor shortages.	Not yet approved	In May 2001, the association received Labor funds to finance a workforce development committee to identify the apprenticeable occupation and develop the work processes and related technical instruction for the apprenticeship.

[a]Although this occupation was approved as apprenticeable about 20 years ago, apprenticeships in it were not available widely until the last few years.

Source: GAO's analysis of data from the apprenticeship programs.

Open communication among employers, employee groups, and the approving agencies has helped speed up and ensure the establishment of these apprenticeship programs. For example, the production technologist apprenticeship was the result of a joint meeting of union and employer representatives. Because the apprenticeship would cross several job classifications, such as engineer, machinist, and electrician, some workers and Labor were not enthusiastic about its potential. This concept was not immediately accepted by some local union workers, who were concerned that allowing these workers to perform tasks that were part of other occupations would jeopardize the other occupations. However, discussions involving all parties allayed their fears. Program planners explained that the quick availability of production technologists who could make small repairs would reduce the production line's lost time, yet machinists would still be called when more expertise was needed. The youth development practitioner apprenticeship also required good communication. Labor officials worked with staff from its Office of Youth Services to hold several forums across the nation to discuss the apprenticeability of the occupation. The exact nature of the position was defined based on information from these forums.

Apprenticeship was initially an unfamiliar concept to the people involved in establishing some of these programs. However, discussion with apprenticeship representatives helped them to understand its value to the employers. The responsibility for educating program sponsors—sometimes one-on-one—typically fell to the Labor or state apprenticeship council representatives who marketed the concept. The expansion of the childcare development apprenticeship from a one-state program to a national one required this type of effort. As part of a national initiative to strengthen childcare workers' skills, Labor sponsored a nationwide

videoconference to discuss the value of childcare worker apprenticeships. Representatives from various state agencies, industry representatives, and apprenticeship representatives participated in the conference, which led to further meetings to discuss the possible implementation of the program in their states. In the three states whose childcare programs we reviewed, training was developed at the state level, which eliminated the need for individual employers to develop their own training plans. Apprenticeship representatives explained the formal training and helped employers understand how it would integrate with the apprenticeship's structure. Similarly, the pharmacy technician apprenticeship required education outreach. Representatives from the apprenticeship councils in Maine and the District of Columbia contacted hospitals and pharmacies to convince them of the value of apprenticeship, particularly in retaining pharmacy technicians. In Maine, the apprenticeship representative explained how the progressive wage schedule would be helpful in overcoming the problem a hospital was having with retaining workers.

Typically, the programs we reviewed required significant resources to develop and deliver formal training. For example, the development of technical courses for the production technologist apprenticeship has cost about $160,000. The employer who provided this money viewed it as an investment in high quality training. For the northern California sound and communication workers, whose apprenticeship training has been provided by a joint employer/union council, two sources have provided funding for training. The employers themselves have contributed $0.30 for each hour that union employees worked, and the state provided more than $4 per hour from a training fund for each apprentice's classroom time.

For some of the programs, particularly those in industries where apprenticeship is not common, government funding was provided to pay for program design, as Labor took on responsibility for helping to identify such funding. Although Labor's ATELS unit does not have regular appropriations for program design, in some cases Workforce Investment Act discretionary funds have been used.[5] The Congress also appropriated $12 million to bolster Labor's childcare development worker apprenticeship initiative. To date, 20 states and the District of Columbia have received grants from this appropriation, which they have used for various purposes, including subsidizing formal instruction and funding apprenticeship representatives who "market" apprenticeship to childcare centers and monitor the on-the-job training. Officials we spoke with in

[5]The Workforce Investment Act provides employment and training assistance for youth, adults, and dislocated workers through one-stop centers.

three states emphasized the important role that these funds played in marketing and implementing apprenticeship within the industry. For the new youth development practitioner apprenticeships that Labor spearheaded, Labor requested grant proposals in April 2001 from entities that wished to receive funds to establish individual programs. About $1.45 million will be available for local organizations and institutions, national organizations, and an organization that can provide technical assistance as programs develop their procedures and curriculum. In May 2001, Labor provided $550,000 to the Computing Technology Industry Association (CompTIA), an IT trade association, to design an IT technical support specialist apprenticeship program. The association will use the funds to convene industry representatives to identify which jobs and skill sets within the IT career clusters would fit the apprenticeship model.

Several sponsors of the apprenticeship programs we studied used innovative approaches to meet apprenticeship requirements while accommodating unique characteristics of the occupation or industry. In four of the programs, distance learning—formal instruction over the Internet or by videoconferencing—was used or is being developed to accommodate workers who could not meet with instructors personally. The production technologist position's formal instruction, designed and taught by university personnel in Illinois, was provided via videoconferencing to workers at the two participating manufacturing facilities in Shreveport, Louisiana, and Denver, Colorado. New Hampshire sponsored on-line training for the childcare development specialist apprentice mentors (the supervisors of the apprentices) and lent them laptop computers to enable them to participate in the courses and network with others who were mentoring childcare apprentices.

Some of the programs adapted their apprenticeships to accommodate unique characteristics of their occupation or industry. For example, the childcare industry typically has low wages relative to other industries. Vermont officials decided to use some of their childcare grant funds to subsidize the wages for apprentices and their mentors, which they believed would raise the status of apprenticeship and attract both apprentices and mentors. In some industries, skill certifications have become key elements of workers' credentials, and in some of the programs we studied, the certifications were made part of the training. For example, the sound and communication workers in northern California integrate into their apprenticeship program the BICSI training, an industry-recognized certification that some contracts require all workers to have. Similarly, CompTIA, a trade association that develops certifications in many technical aspects of personal computer service, support, and

networking, plans to offer certification for IT technical support specialist apprentices who pass the formal instruction.

Conclusions

Labor has not led a systematic effort to identify apprenticeable occupations and, therefore, the full potential of apprenticeships may not have been realized. Some industries with shortages of skilled labor have not used apprenticeship to meet those needs. Labor has focused its efforts to expand apprenticeship on a few occupations for which skills need to be improved and shortages exist. Its efforts to identify new occupations for apprenticeship have been largely reactive and, as a result, Labor is not influencing the expansion of apprenticeships to industries in need of skilled training. Instead of being reactive, Labor can take a leadership role in identifying occupations where apprenticeship can contribute to providing needed skills, using available information and staff to better direct the expansion of apprenticeship nationally. In addition, Labor has identified workforce development funds to support some of these efforts, but has not systematically located resources for apprenticeships needing funds for program design, which could help ensure their success.

Further, Labor has not done all it could to widely disseminate information about the apprenticeship program, although doing so would result in employers overcoming their concerns and wanting to participate. The agency has not set up a way for program sponsors to share information on lessons learned, such as through online databases that sponsors could query, with other employers interested in establishing apprenticeships. Such an information exchange would help potential program sponsors understand how apprenticeship could be beneficial, overcome difficulties that may arise in their efforts to establish a program, and alleviate concerns they have about apprenticeship requirements. For example, this exchange could allow the classroom training modules and work standards established for programs in one location to inform employers and apprenticeship representatives in other locations. Similarly, a more detailed apprenticeship database could help people who are considering establishing new programs by identifying others who have experience in operating similar programs. Currently, the database's incompatibility with some state systems hinders networking and sharing of lessons learned among apprenticeship representatives who are working to establish new programs. It also limits Labor's ability to measure progress on the use of apprenticeship in newly approved occupations.

Recommendations for Executive Action

To expand apprenticeship, particularly into occupations not traditionally apprenticed, Labor must take the lead in coordinating and promoting the development of programs. As part of this effort, we recommend that the Secretary of Labor ensure that ATELS

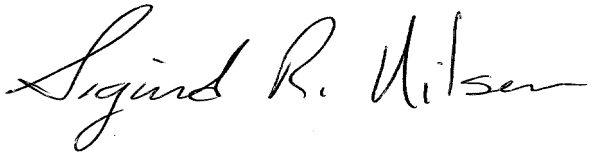
- Lead a systematic effort to work with state apprenticeship councils and others interested to identify apprenticeable occupations that have shortages of skilled labor and establish plans for promoting apprenticeship programs in these occupations,
- Work with other federal workforce development programs to identify funding for developing apprenticeships when additional support is needed,
- Establish a mechanism for sharing among Labor representatives and employers information on apprenticeship programs, particularly those in occupations not traditionally apprenticed, and
- Ensure that the apprenticeship database contains detailed information on current programs so that accurate and complete information is shared and progress in meeting labor market needs can be evaluated.

Agency Comments

The Department of Labor commented on a draft of this report, stating that it agrees with all four recommendations and is planning actions to implement them (see app. III). Labor plans to have ATELS take the lead in identifying apprenticeship opportunities for occupations with skilled labor shortages as well as in new and emerging industries. Through enhanced coordination with other federal workforce investment system programs, ATELS will explore additional financial, technical, and communications support for expanding apprenticeship opportunities. To better share information on apprenticeship programs, ATELS has engaged a contractor to manage a major public information initiative, including reaching out to growth industries and high-demand occupations. Further, Labor stated that in redesigning the apprenticeship information management system, it has begun to make necessary improvements, and expects that the final design will provide accurate and complete information throughout the registered apprenticeship system.

We are sending copies of this report to the Secretary of Labor and other interested parties. We will also make copies available to others upon request. If you or your staff have any questions about this report, please contact me at (202) 512-7215 or Joan T. Mahagan at (617) 565-7532. Key contacts and staff acknowledgments for this report are listed in app. IV.

Sincerely yours,



Sigurd R. Nilsen, Director
Education, Workforce, and
Income Security Issues

Appendix I: Scope and Methodology

We took several steps to determine efforts the U. S. Department of Labor has made to expand apprenticeship to new occupations and to understand the impediments to starting apprenticeship programs in fields not traditionally apprenticed. We interviewed Labor officials at the national, regional, and state levels to obtain an understanding of how apprenticeable occupations are identified and how apprenticeship programs are registered. We visited four states to discuss how each state implements and manages the apprenticeship program, particularly how they approve new programs. From those programs registered in recent years, we judgmentally selected 10 programs in each state that addressed labor market needs or were in nontraditional occupations. We collected detailed information on the approval process and any impediments to it from the responsible federal or state apprenticeship representative and from the employers. We also spoke with members of the Federal Committee on Registered Apprenticeship, National Association of State and Territorial Apprenticeship Directors, as well as trade associations, unions, and other knowledgeable individuals to discuss their roles and obtain their views on expanding apprenticeship to respond to labor market needs.

In order to describe examples of apprenticeship programs that responded to current labor market needs and how they have done so, we studied in depth several apprenticeship programs that either had been established or were being established in occupations that are not traditionally apprenticed. To identify these, we obtained suggestions from Labor officials, state apprenticeship council officials, and other knowledgeable experts in apprenticeship. Our activities in reviewing these programs included speaking to employers, observing and touring a training facility, and speaking to developers of the formal training.

Appendix II: Summaries of Example Programs

Following are summaries of programs that exemplify efforts to develop new apprenticeships that respond to labor needs.

Production Technologist Apprenticeship

Purpose and Description

In 1995, high-level representatives of AT&T's wireless telephone facilities and the union, International Brotherhood of Electrical Workers (IBEW), met to discuss their mutual concerns about the workforce's capability to meet the company's needs as manufacturing processes changed. From that meeting, development of a new apprenticeship was undertaken in an occupation called production technologist. Production technologists were to be responsible for both direct production work on products and for indirect work, such as production planning, routine equipment maintenance, and training.

Development of the Apprenticeship

Management at the Shreveport, Louisiana, and Denver, Colorado, plants agreed to implement the apprenticeship with the union. One issue needing resolution was concern that the position involved combining the skills of a variety of different workers, such as engineers, electricians, and machinists. Some union members believed it would hurt workers in individual trades if the production technologists worked across trades. However, union management convinced them of the importance of including specific training in the apprenticeship, such as less-complicated machine repairs that could reduce production downtime. Labor approved the occupation as apprenticeable in December 1997.

The production technologist apprenticeship was developed as an 8-year program. Under the guidance of the Enhanced Training Opportunity Program, a training program sponsored by both the employer and the union, Northern Illinois University developed many aspects of the position, including the training program. Although workers entering an apprenticeship program at the company would normally have expected to take a pay reduction, IBEW representatives believed that would discourage high-quality workers from applying and negotiated with the employer to pay apprentices their previous salary.

To date, many of the courses have been developed and taught, although development of the work process-specific courses has been expensive—totaling about $160,000 so far. The training developers report that the most expensive part of course development is the design of tests that measure the mastery of critical competencies. Videoconference training has been provided to allow workers from the two geographically dispersed sites to "attend" classes at Northern Illinois University, but transitioning to web-based training to reduce telecommunications costs is actively under consideration. Because of technological changes, the training developers anticipate that some of the courses, such as those on semiconductors and industrial controls, will need to be updated before they are presented to another class of apprentices. In total, the apprenticeship will include 17 major courses as well as some additional training.

Present Status

One challenge to the apprenticeship's continuity is the change of employers during the planning and implementation of the apprenticeship. Initial apprenticeship program discussions were with AT&T, the program was implemented when Lucent owned the production facility, and the division was bought out by Avaya. As of May 2001, Avaya was negotiating the sale of various manufacturing assets and capacity to another company, leaving the future of the apprenticeship program uncertain. As a result, the production technologist apprenticeship program has not expanded since its inception, although it was initially conceived as a program that would train hundreds of apprentices. The training developers report, however, that the eight apprentices in the program have had a major impact on the production process. Some apprentices received corporate recognition for their novel work on improving production-related processes.

Information Technology Technical Support Specialist Apprenticeship

Purpose and Description

A trade association of companies and professional members in the computing and communications market—the Computing Technology Industry Association (CompTIA)—has recently obtained a grant from Labor to pursue developing an apprenticeship for workers to provide information technology (IT) technical support. CompTIA representatives

had recognized the need for on-the-job experience for these workers. Their research has revealed that companies often must train their IT service and support staff to meet company needs. Further, almost half of companies surveyed would pay a higher salary to an individual who had already completed an industry-sponsored IT service and support a certification program that included hands-on working experience, interaction with customers, and working in teams. CompTIA representatives believe these skills can only be developed on the job; students at the postsecondary level often receive technical instruction and successfully test for an industry certification (some of which CompTIA sponsors), but lack the on-the-job experience, thereby reducing their employability.

Development of the Apprenticeship

A representative from CompTIA, aware of the concerns about IT staff needing on-the-job training, heard a Labor Office of Apprenticeship Training, Employer and Labor Services (ATELS) staff member's presentation on apprenticeships at a conference. He realized that the apprenticeship structure could be used to overcome this skill deficiency but also recognized that the industry had not delineated the occupations within the IT service industry and their skill requirements. CompTIA submitted a proposal to Labor requesting a grant of $550,000 to explore registered apprenticeship as a means of addressing the IT workforce shortage and the lack of on-the-job experience that entry-level IT workers often have. Labor, recognizing that CompTIA was in a unique position to convene a knowledgeable team from industry, decided to fund the grant, using monies that the Workforce Investment Act authorized the Secretary of Labor to set aside for dislocated worker demonstration projects.

Present Status

With the Labor grant of $550,000, CompTIA plans to convene a group from industry to identify IT occupations that are apprenticeable, the skills required, and the related instruction requirements. CompTIA believes that with the 2,000 hours of work experience required under the apprenticeship model, the apprentices would be able to gain the skills necessary to perform many of the entry-level jobs in IT technical support, including customer service technician, help desk specialist, network technician, configuration technician, and web developer. The industry representatives would also develop the work processes and related technical instruction required for the apprenticeship, including certifications identified as necessary. CompTIA plans to enlist pilot sites to test the apprenticeship model(s) that is developed.

Sound and Communications Systems Installer Apprenticeship

Purpose and Description

In about 1987, the National Electrical Contractors Association and the IBEW operating in Northern California realized that more sound and communications installers were needed to meet the growing demand for the installation of low-voltage systems, such as those used in remote controls, burglar and fire alarms, data and telephone lines, and audio and video systems. For example, sound and communications installers working at a grocery store construction site could be installing intercom connections throughout the store, public address systems, alarms at entrances, electronic locks that could be on timers, data lines from the cash registers, and satellite data link systems.

Development of the Apprenticeship

A joint apprenticeship and training committee hired a training director to develop the apprenticeship program. The committee identified an existing occupation title that could be used, and modified the work process standards to meet their needs. The training director then developed training for the program and oversaw its implementation. California's apprenticeship council approved the apprenticeship program in 1987, and the first formal training was started in 1993. Funding for the related instruction is obtained from two sources. California provides funds that cover about 40 to 50 percent of the cost of instructors for training. These funds provide a set amount of money for each hour apprentices spend in the classroom ($4.37 as of our March 2001 visit). In addition, the 135 contractors bound by the bargaining agreement that supports the joint apprenticeship training committee pay $0.30 per hour ($0.60 beginning on September 1, 2001) for each hour worked by individuals they employ who are under the bargaining agreement.

Present Status

The present program requires 6,000 hours of on-the-job training, and 450 hours of related formal instruction provided by the joint apprenticeship training committee in facilities that are also used for other IBEW training programs. Instruction ranges from basic courses, such as "Use and Care of Hand Tools" to more technical courses, such as "Certifying the Fiber-Optic Cabling System," and includes BICSI training, a certification program on

cable installation. Twice a week, apprentices attend night classes taught by instructors from the field who have received training on instructing. As of June 2001, about 650 apprentices had completed the program and about 1,100 were enrolled.

Childcare Development Specialist Apprenticeship

Purpose and Description

Labor has spearheaded a national effort to develop apprenticeships for childcare development specialists—those who provide care directly to young children. Labor wished to provide a credentialed career path for childcare providers through registered apprenticeships that would "reduce turnover, increase wages for providers, provide a more stable environment for children, and overall improve the quality of early childhood programs."[1] Although childcare apprenticeships had been implemented in West Virginia earlier, this effort was in response to a 1997 White House effort to focus the nation's attention on the importance of addressing the need for safe, affordable, available, quality childcare.

Development of the Apprenticeship

Using funds provided for this purpose in its budget appropriation, Labor made grants totaling $3.4 million in 1999 and $3.3 million in 2000 to states to implement this initiative. Interest was aroused within the states and the childcare industry through a nationally broadcast videoconference hosted by the Secretary of Labor at a cost of $22,000. Although the videoconference created interest, implementing apprenticeship programs in an industry unfamiliar with the concept involved much coordination and communication. We discussed implementation of the program with officials from Indiana, New Hampshire, and Vermont who received first-round grants. In all three states, the next step was to bring together a diverse mix of representatives—from industry, apprenticeship oversight agencies, and state agencies—who had an interest in childcare. The

[1]As stated in the February 2, 1999, notice of availability of funds and solicitation for grant application for the Quality Childcare Initiative Implementation.

apprenticeship representatives from the states all reported that several meetings were held to reach consensus on what the apprenticeship should entail. One commented that each group had its own jargon, and it took several meetings to develop a common language.

Training was provided in a consistent way to all apprentices in each state. Each state developed a common work process that laid out skills that should be addressed in the 2-year on-the-job portion of the apprenticeship. Each state also identified specific courses apprentices could attend—four courses in Indiana, six in Vermont, and six or seven in New Hampshire—and the colleges where they could attend them. In Vermont, the training is free to childcare providers, and is funded with childcare grant funds; in New Hampshire, the first course is free to the apprentice, paid for with a state health and human service block grant, and half of the remaining courses are also free; and in Indiana, some scholarship funds are available from an organization that supports childcare workers. In addition, each state has developed or is developing training specifically for the apprentices' supervisors. New Hampshire's program used funds from the Labor grant to develop this training and to buy laptop computers for supervisors to borrow for participating in distance learning courses.

Because wage rates within the childcare industry are relatively low, Vermont chose to use part of its Labor grant to subsidize wages for the apprentices and their mentors. Apprentices can earn regular increases that will raise their wages from $0.25 to $2 an hour over the 2-year apprenticeship. Supervisors would also receive wage supplements of $0.50 to $2 an hour. Vermont representatives are planning how to continue this wage subsidy after the grant funding ends. They have written a grant proposal to obtain some state Workforce Investment Act funds and have created an advisory board that is working toward securing long-term funding.

Reaching out to childcare centers to encourage them to sponsor apprentices entailed considerable effort in each of the states. New Hampshire used some of its federal grant funds to hire three recruiters who met with childcare center directors, helped them plan the apprenticeships, and continue to monitor them. One center director commented that if she had not had a representative to help develop the apprenticeship program details, she probably would not have pursued the program. Responsibility for marketing apprenticeship to childcare centers in Vermont has primarily belonged to the Agency of Human Service, whose staff members have made many direct contacts with center directors. Information was also provided to the public through an extensive website. Indiana used part of its federal grants to hire a full-time

project coordinator for the childcare apprenticeship project who recruits both employers and apprentices.

Present Status

As a result of the implementation of the first round of grant awards to 10 states and the District of Columbia, 251 programs registering 527 apprentices had been established through January 2001. In addition, a second round of grants has been awarded to 10 states. Labor anticipates distributing a third round in 2001. Recipients of grant awards are required to identify ways to sustain the program once federal funding ends. States we contacted are grappling with this condition and are exploring a number of options to ensure their program's longevity. Indiana plans to reduce the full-time project coordinator position to part-time. Vermont is seeking sources of funds to sustain its wage subsidies for apprentices and supervisors. New Hampshire's Commissioner of Labor has committed to finding funds to continue to pay for staff to recruit apprenticeship sponsors.

Youth Development Practitioner Apprenticeship

Purpose and Description

Over the last few years, Labor has recognized that an apprenticeship in the youth work field could provide quality training for workers who deliver comprehensive services to young people. Many resources are committed to serving youth as a result of Labor's youth opportunity grants and increased emphasis on youth services under the Workforce Investment Act. Labor wished to upgrade the field of youth work by developing an occupation targeted to supporting youth, and believed that apprenticeship provided the opportunity to systematically examine and address the needs of the field.

Development of the Apprenticeship

Labor itself spearheaded the effort to define the occupation of youth development practitioner and will be supporting its implementation through grants. Early on, Labor drafted on-the-job training requirements and proposed related instruction, and had a focus group comment on them. Labor held forums around the United States to discuss the apprenticeability of this occupation and incorporated those results into the apprenticeship description, receiving enthusiastic support for the

apprenticeship. Labor then approved the occupation as apprenticeable and formally established it as an apprenticeship occupation in October 2000.

In April 2001, Labor announced the availability of $1.45 million in competitive grants to support the dissemination of information, to publicize the occupation and apprenticeship, and to support interested communities in the implementation of the apprenticeship programs. These funds, whose source is discretionary funding authorized under the Workforce Investment Act, are intended to stimulate and support the broad implementation of the apprenticeship. In July 2001, Labor awarded grants to nine entities at the local community level that can serve as intermediaries to bring together stakeholders to establish and register youth development practitioner apprenticeship programs. In addition, Labor awarded three grants to national organizations that have youth programs employing youth development practitioners. Labor also awarded a grant to the National Council on Employment Policy to establish a clearinghouse of information on practice and curriculum to support local communities in developing and implementing their apprenticeship programs.

We discussed the planned implementation of a youth development practitioner apprenticeship program in Alaska with a program representative and the ATELS state director. The Cook Inlet Tribal Council in Alaska recently obtained a Youth Opportunity Program demonstration grant to support about 70 staff members who work directly with youth in 47 locations. Although they have hired staff with available funding, they realize that the level of education and experience among staff members varies widely. Most do not have college degrees, and the employee development director believes the apprenticeship model is a good way to provide the professional development that staff need. She also believes that for rural Alaska, apprenticeship is a useful model because it allows staff to stay in the community to receive the necessary instruction. This helps retain staff who may not return to their communities after locating elsewhere.

Because the youth development practitioner occupation was not defined specifically until recently, curriculum needs to be developed for the occupation, which will cost an estimated $75,000. The Council estimates that the development and delivery of training will cost an estimated $300,000 to $400,000. Staff is widely spread throughout the state and instruction will need to be provided over the Internet. However, many staff members are in villages without Internet providers, which necessitates significant spending on long-distance connections. The employee

development director expects to seek other state funding, possibly through the Workforce Investment Boards.

Present Status

At the national level, Labor selected 13 entities to receive grants totaling about $1.5 million. Meanwhile, at the local level, the Alaska tribal council's employee development director noted that interest in the apprenticeship among the council staff was high, and she planned to start the apprenticeships by October 1, 2001.

Pharmacy Technician Apprenticeship

Purpose and Description

We spoke with apprenticeship officials in Maine and the District of Columbia, who noted that either hiring or retaining pharmacy technicians is difficult for employers in their areas. Apprenticeships for pharmacy technicians are either just recently under way or being developed in each location. Pharmacy technicians serve as aids to pharmacists in store and hospital pharmacies, performing such tasks as keeping records of drugs delivered to the pharmacy, storing incoming merchandise in proper locations, and cleaning equipment.

Development of the Apprenticeship

In the District of Columbia, CVS, a pharmacy chain, was operating a training center housed at the District's Department of Employment Services' center. An apprenticeship representative from the District apprenticeship council convinced CVS that they should sponsor apprenticeships for pharmacy technicians to help meet their growing need for this staff. The apprenticeship representative explained that the structured on-the-job training and formal instruction would provide the staff with the necessary skills. A 2-year apprenticeship program was established that requires 144 hours of formal instruction each year. Workers are released from work to attend the training, and CVS provides the formal instruction.

In Maine, a pharmacy technician apprenticeship program is being established with Maine Medical Center, a large hospital with about 40 staff members in its pharmacy department. The hospital had a high turnover rate for these technicians—42 percent in 2000—who often left after they were trained. After the representative from Maine's apprenticeship council explained apprenticeship to the pharmacy department, department

management became convinced that they needed to increase wages. After an analysis of comparable wages elsewhere, they decided to raise pharmacy technicians' wages an average of 13 percent, with the entry-level apprenticeship wage rising from $8.53 to $9.99 and the top wage rising from $14.99 to $18.64. Management also established training requirements, one of which is for apprentices to take two courses each semester from a local technical college for which the state will pay $100 per course. The college offers the required courses on-line, allowing other pharmacy technicians located throughout the state to participate if their employers sponsor apprenticeship programs.

Present Status

The courses in the District presently have three apprentices enrolled. In Maine, some apprentices had already started courses but the agreement with the Maine apprenticeship council had not been finalized as of June 2001. A representative from the hospital expected that they would limit the number of apprentices to 10. The apprenticeship representative hopes to now convince other hospitals in Maine to replicate the Maine Medical Center's program and is reaching out to some pharmacy chains.

Appendix III: Comments From the Department of Labor

U.S. Department of Labor

Assistant Secretary for
Employment and Training
Washington, D.C. 20210

AUG 24 2001

Mr. Sigurd R. Nilsen
Director, Education, Workforce,
and Income Security Issues
U. S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Nilsen:

On behalf of the Secretary of Labor, we thank you for the opportunity to review and provide comments on the U. S. General Accounting Office (GAO) draft report, entitled Registered Apprenticeships: Labor Could Do More To Expand to Other Occupations (GAO-01-940). This report provides a framework for the Employment and Training Administration (ETA) and the Department to expand and improve the Registered Apprenticeship System. In an effort to clarify a certain portion of the report, we suggest that you slightly modify pages 5 and 6. We have made our proposed changes on the enclosed copy of the draft report.

The Department will be taking major steps to address the concerns in the report. The Secretary's goal of providing businesses and workers with skills for the 21st Century will be enhanced by an improved apprenticeship program. The following is our response to you on the four recommendations in your report:

1.) Lead a systematic effort to work with the state apprenticeship councils and others interested to identify apprenticeable occupations that have shortages of skilled labor and establish plans for promoting apprenticeship programs in these occupations.

Response

The Department agrees with this recommendation. The Office of Apprenticeship Training, Employer and Labor Services (OATELS) in the Employment and Training Administration (ETA) will take the lead on identifying apprenticeship opportunities for occupations with shortages in skilled labor as well as new and emerging industries. OATELS' goal will be to expand apprenticeship in high skilled occupations and high skilled industries to help meet 21st Century workforce needs.

Using industry and occupational data available from the Bureau of Labor Statistics and state and local labor market information, OATELS will be better positioned to identify growth industries and occupations in demand. In partnership with the Federal Committee on Registered Apprenticeship, the National Association of State and Territorial Apprenticeship Directors, and state workforce leaders, the agency will aggressively identify opportunities to expand the apprenticeship system to non-traditional as well as new and emerging occupations.

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2.) Work with other federal workforce development programs to identify funding for developing apprenticeships when additional support is needed.

Response

Through enhanced coordination with other federal programs involved as both mandatory and voluntary partners in the workforce investment system authorized by the Workforce Investment Act, OATELS will explore additional financial, as well as technical and communications, support for expanding apprenticeship opportunities. Additionally, the agency will facilitate increased employer and labor involvement in the full array of workforce development programs, including apprenticeship. Full involvement with the public and private participants in the workforce system will help "mainstream" the apprenticeship system as a vehicle to help meet skilled workforce needs.

OATELS has initiated actions to build stronger relationships with Workforce Investment Boards, One-Stop Centers, businesses, other federal agencies, and community and faith based organizations. Efforts are continuing with national, state, and local workforce development agencies highlighting the benefits of the registered apprenticeship system.

3.) Establish a mechanism for sharing among Labor representatives and employers information on apprenticeship programs, particularly those in occupations not traditionally apprenticed.

Response

OATELS has engaged a contractor to manage a major public information initiative. The framework for the work plan includes the following:

Conduct research to identify growth industries and new and emerging businesses, necessary skill sets, and needed qualifications;

Develop and test public information materials and strategies for outreach and recruitment of businesses and new partners;

Launch a national public information campaign;

Perform outreach to growth industries, high demand occupations;

Assess effectiveness in increasing the type and number of businesses that sponsor apprenticeships, including persons with disabilities.

This initiative provides for a new and innovative approach for registered apprenticeship in new and emerging industries and develops public information and training strategies to assist employers to identify and develop high skill training through registered apprenticeship.

4.) Ensure that the apprenticeship database has detailed information on the current programs so that accurate and complete information is shared and progress in meeting labor market needs can be evaluated.

Response

We strongly agree with your recommendation. Aware of weaknesses in our database, we have begun to make the necessary improvements. The current redesign of the apprenticeship information management system began with the Business Discovery Project conducted by NCR and the subsequent forums conducted through the Apprenticeship Impact Project. The final design, projected to be completed during FY 2002, will provide accurate and complete information that will be shared with the Registered Apprenticeship System.

In addition, ETA and the Department will continue to use their Internet sites to share collected information, including program information, marketing materials, and best practices.

I would like to compliment the members of your staff who participated in the project. They provided extremely helpful comments and suggestions on how we can strengthen and improve the Registered Apprenticeship System.

Sincerely yours,

Emily Stover DeRocco

Enclosure

Appendix IV: GAO Contacts and Staff Acknowledgments

GAO Contacts

Sigurd R. Nilsen, Director, (202) 512-7215
Joan T. Mahagan, Assistant Director, (617) 565-7532

Staff Acknowledgments

In addition to those named above, Kevin F. Murphy, Corinna A. Nicolaou, Carol L. Patey, and James P. Wright made key contributions to this report.

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