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Office of Apprenticeship
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Employment and Training Administration
United States Department of Labor

**Registered
Apprenticeship
Trends in
MARITIME**



Registered Apprenticeship In the Maritime Industry



Registered Apprenticeship training plays an important role in developing skilled workers. With the combination of on-the-job learning, related instruction, mentoring and incremental wage increases, the apprenticeship model can be an effective system for addressing human resource issues and skill shortages that many industries/businesses face. Registered Apprenticeship can provide the expertise and knowledge individuals need to do their jobs effectively and advance in their careers.

Twenty-first century apprenticeship allows for a flexible competency-based training strategy that enables apprentices to move through a program at her/his own pace, benchmark the achievement of each set of core competencies and build a portfolio of skills and interim credentials that validate the acquired skill levels. Additionally, the related instruction is articulated with many two- and four-year colleges, allowing apprentices to work toward a degree. This is good news for the maritime industry because it meets many of their human resources and skills training needs.

The maritime sector is a vital part of the U.S. transportation industry. Both face very difficult challenges: recruitment and retention of a qualified workforce, skills development—particularly safety and new technology—and cost-effective training. U.S. flagged

ships are used strategically to transport cargo to U.S. troops as well as to carry goods and provide high-quality leisure to vacationers on cruise lines.

The Seafarers International Union, working cooperatively with major U.S.-flag ship operators, has developed an innovative, competency-based apprenticeship training model that fills the need for high-quality training required of seafarers to do their jobs well. This model has important implications for the transportation industry overall - be it ground, sea or air transport, transit or rail.

The Registered Apprenticeship model has proven its ability to address these and other issues in many industries and should become part of the human resources and training strategy for transportation. The model offers an efficient, flexible training system that is responsive to new technology to keep workers up-to-date on skills they need to do their jobs.

The U.S. Department of Labor (DOL), Employment and Training Administration (ETA), Office of Apprenticeship (OA) made a strategic decision to introduce the model to the transportation industry. "Advancing the Apprenticeship System" is one of the department's key initiatives, with investments of more than \$15 million to fund apprenticeship programs in new industries through the President's High Growth Jobs Training

Initiative. They include:

- Biotechnology
- Health Care
- Advanced Manufacturing
- Information Technology
- Maritime Trades - Transportation
- Military - Indiana National Guard
- Geospatial Technology

The following case study looks at results of investments and marketing efforts in the maritime industry. There are promising trends that point to the value of apprenticeship:

Benefits to Employers

- Greater competence of employees
- Reduced turnover rates
- Greater employee retention
- Lower investment in recruitment
- Higher productivity
- Improved quality of products and services
- More diverse workforce

Benefits to Apprentices

- Nationally recognized and portable certificates
- Improved skills and competencies
- Increased wages as a result of mastered competencies
- Ability to advance in career
- Higher self-esteem based on enhanced skills and certifications

Industry: **MARITIME**

Vital Industry Needs a Ready and Able Workforce

U.S. merchant mariners work on 40,000 privately owned ships, tugs, supply boats, ferries and dredges registered under the U.S. flag. Additional merchant mariners work on seelift vessels, which are operated by contractors but owned by the government and deployed by the U.S. Navy in its Military Sealift Command.

Marine transportation is vital to national security and ensuring mobility of U.S. goods around the world and, therefore, is a strategic industry for government.

U.S. and world business conditions and technological change determine the level of seafaring employment. In 2004, total employment in all maritime occupations was 72,000. The industry is expected to grow up to 8 percent by 2014.

Although the overall size of the maritime workforce is not expected to grow substantially, the workforce needs to be continuously replenished because of retirements and other movement out of the industry and the need for people trained in emerging occupations. The recent addition of a cruise line to the U.S.-flag fleet, for example, has created a demand for all workers trained in new occupations.

Source: Bureau of Labor Statistics, 2005

Project Overview

Almost all unlicensed mariners with U.S. companies are recruited and trained through the companies' contractual agreements with the Seafarers International Union (SIU). SIU is the largest North American union representing merchant mariners. The largest training facility for deep-sea merchant seafarers and inland waterways boatmen is SIU-affiliated Paul Hall Center for Maritime Training and Education in Piney Point, Maryland.

SIU has operated an apprenticeship program since the Paul Hall Center opened in 1967. In collaboration with the companies with which it has contracts, SIU has modified its apprenticeship program through the years. In May 2003, SIU's program became a Registered Apprenticeship under DOL's auspices.

At the Paul Hall Center, apprenticeship training is called the Unlicensed Apprentice Program. It is designed to prepare workers for shipboard life in which they live and work in a confined and isolated environment far from home. The physically rigorous program is conducted in a quasi-military environment. Students must wear uniforms, adhere to military-style grooming, live in group dormitories, and march to and from class.

Training covers the duties and responsibilities of seamanship in the three shipboard departments: deck, engine, and steward. Training is comprehensive and includes highly structured classroom learning and hands-on training. Basic or remedial education, such as that to attain a high school equivalency degree, is also available. Training lasts about 11 months and includes four phases:

- **Phase I** - structured, 12-week curriculum at the Paul Hall Center that prepares students for maritime positions in the deck, engine or steward departments.



- **Phase II** - 12 weeks aboard a vessel contracted with the SIU. The student spends four weeks in each of the three departments to get hands-on experience.
- **Phase III** - six weeks of training at the Paul Hall Center that is primarily in the student's selected area of specialization as Specialty Trained Ordinary Seaman (deck), Engine Utility (engine) or Galley Operations (steward). Successful completion of this phase constitutes completing the apprenticeship and earns the apprentice a DOL certificate of completion. The apprentice also receives a maritime rating in one of three occupations: Able Seaman (Water Transportation), Chief Cook (Water Transportation), or Fireman, Oiler and Watertender (Water Transportation).
- **Phase IV** - at least 12 weeks at sea in a first entry-level job with an SIU-contracted company as ordinary seaman (deck), wiper (engine), or steward assistant (steward).

The cost to the apprentice for the entire training program is about \$1,500. The tuition is offset by stipends awarded while apprentices are in training and the wages they are paid while aboard ship. Funds from some local workforce development programs also cover costs for some apprentices.

At the end of 2006, about 1000 apprentices had completed the program. About 500 more are currently in the program, either at the training facility or working at sea.



Cruise Ship Hospitality Certificate

The addition of a cruise line to the U.S.-flag fleet in 2005 created a demand for U.S. workers in a wide variety of maritime hospitality-related occupations such as cook, waiter, bartender, bell hop, and bedroom steward, among others. In response, the Paul Hall Institute applied for and was awarded a grant from DOL in May 2006 under the President's High-Growth Job Training Initiative to develop an apprenticeship program resulting in a Cruise Ship Hospitality Certificate. This important credential is a stepping stone toward participation in a full Registered Apprenticeship program.

The Paul Hall Institute's cruise ship hospitality competency-based curricula consist of 1,000 hours of training: 220 hours of classroom work and 780 hours of on-the-job training. In addition to receiving occupationally specific training, all participants learn basic maritime-related safety in a number of areas including lifeboat evacuation procedures. To work as crew members, participants must

Workforce Challenges

Managers of the apprenticeship program and the strategic plan of the Maritime Administration, U.S. Department of Transportation, identified the following workforce challenges:

Recruitment and Retention

- Need for additional recruits to replace an aging mariner workforce
- Need to replace mariners who, on average, work at sea only 8-9 years before moving to shore-side employment or work on inland waterways
- Changes in the size and skills required resulting from industry changes, such as increases in the number of military ships activated for duty or a new U.S.-flag cruise line
- Quality-of-life issues resulting from confinement and isolation of shipboard life
- Insufficient awareness of the availability of seafaring work and of its benefits

Education and Training

- Additional training that many mariners need to comply with new amendments to the International Maritime Organization's Standards of Training, Certification and Watchkeeping (STCW)

Apprentice Profile



Ariel Lopez
Apprentice
Seafarers International Union
Piney Point, MD

Ariel Lopez was unemployed and a school dropout in Brooklyn when he heard about the apprenticeship program from an older cousin who had completed the program and liked it. Ariel liked the idea of traveling and the thought of making more money than he could at home, where jobs seemed to pay no more than minimum wage. He convinced some of his friends to apply along with him, and they all went to the union hiring hall. They were all accepted into the program within a few months.

Ariel has really liked the one-on-one attention the apprenticeship program offers: "If you need help understanding something, there is always someone you can go to at any time." This extra support was especially helpful to him as he studied for his GED.

The three months on board a 900-foot car carrier helped Ariel confirm that he wanted to become a merchant mariner. The time also helped him decide what specialty he wanted. He started out thinking he wanted to work in the steward department, but his shipboard experience made him decide he would rather work on deck.

Ariel's advice to someone coming into the program would be: "Stick with it." The hardest part for him was being away from home for the first time. But he would recommend this program to "anyone who wants to do something different with their lives."

obtain a Merchant Mariner's Document which requires them to pass a background and criminal check, including drug screening.

Cruise ships carrying 2,000 to 2,500 passengers require as many as 1,000 crew members to maintain safe operations and provide customers with many of the same services they would expect to receive in fine hotels. Cruise ship hospitality jobs are expected to grow as additional port-to-port cruise lines, ferry boats and "gaming" river boats increase. Since its inception, the Paul Hall Institute's Cruise Ship Hospitality Certificate program has enrolled more than 1,700 participants.



Role of Registered Apprenticeship

Interviews with employers and apprentices indicated that Registered Apprenticeship plays an important role in providing opportunities to men and women interested in the maritime industry and to the industry itself.

Company representatives were positive about the apprenticeship program as a way to meet their worker needs. They believed SIU's apprenticeship program provides them with a well-prepared workforce. Specific advantages they cited were:

- The apprenticeship program's significant shore-side training in combination with shipboard experience produce graduates who are well-trained for work and knowledgeable about what to expect on board a ship.
- Because of the amount of time they have invested in training, graduates are more committed to the industry, which makes them likely to stay in it longer.
- The specialized training apprentices receive in the third phase of the apprenticeship gives the company more flexibility in the work they can have graduates do when they arrive for their entry-level job.
- The competency-based advancement inherent in the program assures employers that workers can efficiently, effectively, and safely carry out their duties.

Employer Profile

Interocean American Shipping (IAS) operates tankers and other oceangoing vessels owned by affiliated companies and third-party U.S. and international owners. IAS's currently managed fleet is divided into two groups: commercial, i.e., private or oil company- owned vessels, and U.S. government-owned vessels. The vessels include product tankers, barge carriers, roll-on—roll-off vessels, crane ships, breakbulk carriers, and car carriers. The current fleet consists entirely of U.S.-flag ships with U.S. crews supplied through the American Maritime Officers and SIU. In the fall of 2006, IAS had apprentices on board 25 vessels.

Robert B. Rogers, Vice President of Human Resources for IAS in Voorhees, NJ, has been involved with SIU for more than 30 years, has been on the Board of Trustees of the Paul Hall Center for 14 years, and was positive about the Registered Apprenticeship program. In particular, he described the addition of shipboard, "real world," training as "an excellent change" from the shorter, shore-side training program that the center used to offer. He described the apprenticeship program as "definitely cost-effective." Even though training apprentices for almost a year is costly to the industry—which funds the training program—they are getting their money's worth, he said. During the three-

month shipboard phase, apprentices "supply extra hands at a reasonable price." Being able to pay a lower wage for three months of work partially offsets the overall cost of training.



He believes employers may also save money because apprenticeship graduates are better prepared to work safely. He described graduates of the apprenticeship program as a "much, much better product"—they have greater maturity and are better prepared to work safely. To the extent that they are involved in fewer accidents, then the company saves money.

Mr. Rogers described the apprenticeship program as an excellent opportunity for men and women who want to work in the maritime industry. He would like to see the program emphasize to apprentices that they are entering what can be a lifetime career, with lots of opportunities to advance—not just a job for a few years.

Participating Employer Sponsors:

- Alaska Tanker Company (Beaverton, OR)
- American Steamship (Williamsville, NY)
- Crowley Liner (Jacksonville, FL)
- Horizon Line (Kenilworth, NJ)
- Liberty Maritime (Lake Success, NY)
- OSG Ship Management (New York, NY)
- Pacific Gulf Marine (New Orleans, LA)

Apprenticeable Occupations Include:

- Unlicensed mariners work in one of three shipboard departments:
 1. **Deck** (navigation, cargo handling, and management)
 2. **Engineering** (propulsion, maintenance, and management)
 3. **Steward/hotel** (food services, sanitation, and accommodations).
- Upon reaching journey-level status apprentices may enter into one of three occupations:
 1. **Able Seaman** (Water Transportation)
 2. **Chief Cook** (Water Transportation)
 3. **Oiler and Watertender** (Water Transportation)

Apprentices receive extensive training at very little cost to them, while also getting paid either a minimal stipend (while in classes) or a wage higher than minimum wage (while they are on board a ship). The training on board a ship in Phase II allows them to decide if this is a career that interests them before they have invested more time in training.

Graduating from the program starts apprentices on a productive career path. The pay is good; they can quickly make more than \$40,000 a year with good benefits, including health care and pensions. Their opportunity to get the work they want is enhanced by the fact that they accumulate union seniority while in training. As apprenticeship graduates, they also can go back to the Paul Hall Center to get an associate's degree or take courses toward becoming a licensed officer.

The apprenticeship program moves apprentices into a career that provides great flexibility about where they can live and the amount of time they choose to work. A mariner can have a home in any part of the country and ship out from different ports as opportunities arise. A mariner who works 151 days a year at sea maintains his/her SIU seniority and eligibility for SIU benefits. As a result, the seafarer can work "at home" during certain seasons and "at sea" during others. For people from some parts of the country, especially rural areas, this provides an annual income and benefits far above what they could receive in their home area.

Even if the graduates decide not to make a lifelong career of working at sea, they can make and save money that gives them more options for future education and careers. One apprentice, for example, described this as a way to work a few years and save money for a four-year college program. One additional benefit is the credential DOL provides. The certificate of completion is nationally recognized and gives them flexibility either to continue in the maritime industry or to qualify for work or training in a related occupation/industry.

Role of Workforce Development System

Because of the nature of the maritime industry, the apprenticeship program is structured to recruit applicants from anywhere in the country and to provide employment on any ship with SIU contracts, which might sail from any U.S. port. As a result, program staff members have sought to develop relationships with state and local workforce development organizations across the country, not just in the geographical area of the training program.

One key partnership, for example, is with a local workforce agency in Alaska. SEA (Seafarers Educational Alternative) Link, Inc. is a nonprofit organization that is funded, in part, through the Workforce Investment Act to help place Alaskan adults and youth in training programs that qualify them to work as merchant marines. SEA Link not only publicizes the apprenticeship program and helps youth qualify for it, but also helps pay their way and provides supportive services while they are in the program and for a year after graduation.

Program officials have met with local workforce agency officials from many states to discuss the apprenticeship opportunity. They have also counted on DOL to disseminate information about the program to the public and state and local agencies throughout the workforce development system. As a result, half of the 1,700 Hospitality certificate enrollees and one-third of the 600 maritime apprentices were recruited from One Stops.



Preliminary Observations

Apprenticeship is a training model with a track record for producing a skilled workforce of unlicensed merchant mariners. Establishing SIU's program as a Registered Apprenticeship through DOL is seen as adding value to the model.

Recruitment and retention:

Program managers hope the program's Registered Apprenticeship status will help with recruitment. To meet strict background checks required by the U.S. Coast Guard and the Department of Homeland Security, the program needs a large applicant pool to fill training slots. Publicity on the DOL apprenticeship web site and with local workforce development offices will allow the program to reach many more men and women. Because of the length of the training, program managers believe that graduates are more committed and likely to stay in their jobs.

Cost-effective method of training:

Interviews with employers provided several reasons why they believe the current apprenticeship program is cost-effective. First, it has improved retention in the industry, which reduces the cost of recruiting and training new workers. Second, employers are able to pay the union-negotiated, incremental apprenticeship wage while the men and women are in training. Third, program graduates are well-prepared to work safely, which reduces the likelihood of costly accidents.

Increased skill level:

The combination of training on shore in the classroom and on-board vessels produces well-trained and knowledgeable graduates, according to program managers. Competency-based advancement ensures that employees are efficient and effective.



For More Information

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