



Task Force to
Study Economic Development
and Apprenticeships



FINAL REPORT



Annapolis, Maryland
February 2014

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THE MARYLAND GENERAL ASSEMBLY
ANNAPOLIS, MARYLAND 21401-1991

February 5, 2014

The Honorable Martin J. O'Malley, Governor
The Honorable Thomas V. Mike Miller, Jr., President of the Senate
The Honorable Michael E. Busch, Speaker of the House of Delegates

Gentlemen:

Chapter 665 of the Acts of 2012 established the Task Force to Study Economic Development and Apprenticeships. The task force's primary purpose was to research the effectiveness of apprenticeship programs in other states and nations, with emphasis on Germany and Switzerland and other nations in which U.S. businesses participate abroad. The task force was also charged with, based on the preceding, considering how existing apprenticeship programs in Maryland could be improved. To accomplish its primary purpose, the task force:

- studied the effectiveness of programs within the State;
- addressed the contributions of secondary and post-secondary education to successful apprenticeship programs;
- determined the appropriateness or feasibility of a major expansion of apprenticeship in the State, through the use of youth or registered apprenticeship programs, and determined whether to develop a multiyear expansion plan; and
- developed and recommended a pilot apprenticeship program based on successful and effective programs studied by the task force.

This report is the final report of the task force.

Sincerely,

A handwritten signature in blue ink, appearing to read "Luiz R. S. Simmons".

Delegate Luiz R. S. Simmons
Chair

LRSS/LHA/mlm

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And Apprenticeships
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Task Force to Study Economic Development And Apprenticeships

Overview of Task Force Meetings

The task force met four times in 2013. During the first meeting, the task force reviewed its charge and set the agenda for the remainder of its meetings. In addition, the task force received an overview from the Maryland Apprenticeship and Training Council (MATC) on its mission, current activities and scope, and apprenticeship models in other states and nations. The second meeting of the task force covered the German Vocational Training Model and the Governor's Office's collaboration with the German Embassy regarding the potential for implementing a similar German apprenticeship model in Maryland. In addition, the second meeting included a follow up on Career Technology Education Programs within the Maryland State Department of Education (MSDE).

During its third meeting, the task force was briefed on the newly enacted Maryland EARN (Employment Advancement Right Now) Program and apprenticeship programs in community colleges. During this meeting, the chair requested that members submit proposals to expand or enhance apprenticeship in the State for consideration by the task force. The fourth meeting of the task force included an overview of academic research on South Carolina and Wisconsin apprenticeship models. The task force also generally discussed proposals submitted by the Commissioner of Labor and Industry for the Department of Labor, Licensing, and Regulation (DLLR), community colleges, and MSDE. During the fourth meeting, the chair formed a workgroup to develop a specific set of recommendations for consideration by the task force.

Apprenticeship in the United States and Maryland

Generally, apprenticeship is a voluntary, industry-sponsored system that prepares individuals for occupations typically requiring high-level skills and related technical knowledge. Apprenticeships are sponsored by one or more employers and may be administered solely by the employer or jointly by management and labor groups. An apprentice receives supervised, structured, on-the-job training under the direction of a skilled journeyman and related technical instruction in a specific occupation. Apprenticeships are designed to meet the workforce needs of the program sponsor. Many industry sponsors use apprenticeship as a method to train employees in the knowledge necessary to become a skilled worker. This also means the number of apprenticeships available is dependent on the current training needs of the industry.

Apprenticeships are available to individuals ages 16 and older; an employer, however, may set a higher entry age. By law, individuals must be 18 years old to apprentice in hazardous occupations. Apprenticeships last from one to six years, although most are three to four years,

and involve a minimum of 144 hours of classroom instruction per year and at least 2,000 hours per year of on-the-job training. A national apprenticeship and training program was established in federal law in 1937 with the passage of the National Apprenticeship Act, also known as the Fitzgerald Act. The purpose of the Act was to promote national standards of apprenticeship and to safeguard the welfare of apprentice workers.

Along with 27 other states, Maryland has chosen to operate its own apprenticeship programs. In 1962, Maryland created the 12-member MATC. Within the framework established in federal law, the State's apprenticeship and training law also established the guidelines, responsibilities, and obligations for training providers and created certain guarantees for workers who become apprenticed.

MATC serves in a regulatory and advisory capacity by providing guidance and oversight to the Maryland Apprenticeship and Training Program, which is responsible for the daily oversight of State apprenticeship programs. More specifically, MATC approves new apprenticeship programs and changes to current programs. The approval process involves assessing the appropriateness of an apprenticeship program in a proposed industry, the education that will be provided to the apprentice, the current staffing level of the entity proposing the program to determine whether adequate supervision can be provided, recruitment and retention efforts, and the overall operations of the entity. MATC also serves in an advisory role for legislation and regulations, recommending changes to update apprenticeship laws.

The Need for Expanded Apprenticeship in Maryland

In the course of conducting its activities, the task force determined that the United States lags behind European countries regarding the number of apprentices. According to information from the Urban Institute, apprenticeship training involves approximately 50% to 80% of youth in Austria, Germany, Switzerland, and Denmark, while in Maryland only 5.6% of registered apprentices are between the ages of 16 and 20. In England alone there are approximately 500,000 apprentices, while the U.S. Department of Labor reported that in federal fiscal 2012 there were about 358,000 individuals actively participating in apprenticeship programs. The Urban Institute data further detailed that "Canada has more apprentices in absolute numbers than the United States" even though the Canadian workforce is about one-tenth the size of the U.S. workforce.

Skill mismatches and weak career opportunities for youth are the two key reasons for expanding apprenticeship in Maryland. Joblessness is widespread among young people after high school, with over one in three out-of-school 19- to 22-year-olds not holding jobs. A March 2013 study conducted by the Urban Institute revealed that 69% of non-Hispanic, White young adults that were not in school were employed as compared with 51% of non-Hispanic, Black young adults and 61% of Hispanic young adults. Even among youth holding jobs, too many are in unrewarding careers. Some drop out formally from high school while others graduate with few options. Disengagement from school is a major cause of dropouts from high

school and community college. Meanwhile, many firms report skill shortages, especially of technically trained workers.

The task force finds that Maryland has too few options for young people to prepare for rewarding careers. Although many young people thrive and become well prepared for the job market on the basis of their university and community college education, others fall short because of disengagement from school or a mismatch between their course work and available quality careers. Further, the task force agrees on the desirability of expanding and updating apprenticeships in Maryland in order to widen access to rewarding careers. Currently, Maryland's registered apprenticeship system trains less than 8,000 apprentices, 82% of which are in construction trades. Maryland apprentices account for less than 0.4% of the workforce.

Given the experience of other countries and other states, the task force finds that there is room for establishing more apprentices in existing fields and in occupations with no official registrations. The remainder of this report reviews apprenticeship models in other states and countries and proposes concrete recommendations as a first step in a long-term process of building a vibrant apprenticeship system.

Apprenticeship Models in Other Jurisdictions

Several models exist that could help promote apprenticeship in Maryland. The task force studied a variety of apprenticeship models. Below are summaries of five apprenticeship/pre-apprenticeship models, aspects of which could be adopted in Maryland.

The Germany Model

The "dual system" refers to Germany's system of combined school-based vocational education and on-the-job training. The dual system has been in existence since 1869. The German government provides financial support for the school-based vocational training and for the infrastructure of the dual system, including setting standards, oversight, evaluation, and research. Employers finance the work-based components, including trainers, apprentice wages, and any equipment designated for the dual system. The German government provides the legal framework for all provisions governing initial and continuing vocational training. Vocational training aspects include:

- training that is centered on vocational competence, is provided by the employer, and is supported by part-time vocational schooling;
- students spending three to four days a week with the employer and one to two days a week at school;
- general and vocational knowledge that is taught within the framework of compulsory education; and

- vocational subjects receiving two-thirds of the teaching time and general subjects receiving one-third of the teaching time.

The dual system training program takes between two and three-and-one-half years on average for a student to complete. After a student is fully trained, the student gets a state-recognized training certificate, a full compulsory education, and generally a job at the company where the student trained. Some of the top sectors involved with the dual system include industry, commerce, skilled trades, health, office/administration, and agriculture. Currently, the dual system has approximately 1.6 million students training in 348 occupations.

The Manitoba, Canada Model

Apprenticeship Manitoba was established in 1944 and is administered by the province's Department of Jobs and the Economy. The Manitoba High School Apprenticeship Program (HSAP) operates under the umbrella of Apprenticeship Manitoba. Apprenticeships in Apprenticeship Manitoba include between one and four levels that an apprentice must complete before the apprentice is eligible to take the certification test to become a journeyman. HSAP allows students to begin the apprenticeship process (level 1 and level 2) while they are in public or private high school, home school, or completing high school education at an adult learning center. HSAP apprentices attend high school full-time and participate in on-the-job training part time, but do not receive certification in their field of study by the time they graduate high school.

To participate in HSAP, students must be enrolled in an approved Manitoba grade 10, 11, or 12 program, and be at least 16 years of age. HSAP apprentices receive a wage of at least 10% or more than the Manitoba minimum wage rate (\$10.45). Employers who participate in HSAP and who are not eligible for the Canadian apprenticeship tax credits can claim a 10% tax credit for wages paid to HSAP apprentices in level 1 and level 2, with up to a maximum of \$2,000 per year for each apprentice. The credit varies by region in the province with employers in Winnipeg eligible to claim 15% of wages and employers in northern Manitoba eligible to claim 20%.

If a HSAP apprentice transitions into full-time, post-secondary apprenticeship training after graduating high school, the apprentice is eligible for assistance to offset tuition costs as follows:

- for every 110 hours of on-the-job training received as a HSAP apprentice (up to 880 hours), a tuition exemption for one level of in-school training taken in Manitoba; and
- the incentive may be claimed up to seven years after the apprentice graduates from high school.

As of March 31, 2013, Apprenticeship Manitoba had 9,885 active apprentices, while HSAP had 1,142 apprentices. There are over 40 qualifying trades under HSAP, including industrial trades, transportation trades, construction trades, and service trades.

The Georgia Model

The Georgia Youth Apprenticeship (GYA) Program was established in 1993 and is administered by the Georgia Department of Education. GYA follows federal requirements for youth apprenticeships, which include at least 144 classroom hours and 2,000 on-the-job training hours. Georgia budgets approximately \$3 million for GYA and a portion of the funds are directed toward coordinator positions in local school systems that assist students in finding work-based learning programs. Upon completion of an apprenticeship program, students receive a high school diploma, a post-secondary degree or certificate, and certification of industry-recognized competencies.

School systems are expected to implement programs that have a well-defined occupational focus beginning in grade 11 but are broad enough so that students can choose from a variety of career options by the end of high school. Teachers, counselors, administrators, and representatives from the employer and labor communities design the program. In Georgia, 143 out of 195 school systems are currently participating in the apprenticeship program, serving a total of 6,776 students, and individual school systems are responsible for advertising GYA to both students and employers.

Some of the top industry sectors participating in GYA include business, marketing and information management, environmental and agricultural sciences, health and medical services, human services, and technology and engineering. GYA requires employers to pay apprentices at least the minimum wage, with the potential for incremental wage increases, and wages are progressive and may incrementally rise based on how the apprentice progresses through the program. Unlike other apprenticeship program models, Georgia does not offer any tax incentives to employers for participation in the apprenticeship program.

The South Carolina Model

In 2008, the South Carolina Chamber of Commerce, in collaboration with South Carolina Technical College System, developed Apprenticeship Carolina. Employers with registered apprenticeship programs are eligible to receive a tax credit of \$1,000 for each registered apprentice employed for at least seven months during each year of his or her apprenticeship program, for up to four years. Any South Carolina employer, including a government agency, is eligible to sponsor and register an apprenticeship program. Registered apprentices must be at least 16 years of age and meet minimum educational requirements for a given program, and a program that is registered with the U.S. Department of Labor awards a nationally recognized credential to both the employer and the employee.

Technical instruction and training is often delivered by a technical college as opposed to a school district. Apprenticeship Carolina is primarily for adult apprenticeships. An Apprenticeship Carolina program can range in length from one to six years depending on the level of training that is commonly given in the occupation and the employer's needs. Employers

are required to pay apprentices at least the minimum wage with apprentices receiving increases based on how the apprentice progresses through the program.

Apprenticeship Carolina follows federal guidelines that require at least 2,000 hours of on-the-job training for apprenticeships. Some of the top industry sectors include construction technologies, energy (including agribusiness and biofuels), health care, information technology, advanced manufacturing and technology, transportation, distribution and logistics, and tourism and services.

Using effective marketing by Apprenticeship Carolina staff, South Carolina has become the fastest growing state apprenticeship program. Between 2008 and 2013, Apprenticeship Carolina attracted nearly 600 additional employers providing nearly 5,000 additional registered apprenticeship positions. Moreover, only a small share of the added apprenticeships has been in construction.

The Wisconsin Model

The Wisconsin Department of Workforce Development began the Wisconsin Youth Apprenticeship (WYA) Program in 1991 as part of its “School-to-Work” initiative. The department marketed the program to employers through its website and a local consortium to recruit local businesses to recruit and hire students. The consortium consisted of school districts, technical colleges, employers, and organized labor. WYA includes programs of up to two years with two levels, and students may start either program as juniors or seniors in high school. Level 1 requires at least 450 hours of work-based learning and two semesters of related classroom instruction, while Level 2 requires at least 900 hours of work-based learning and four semesters of related classroom instruction.

Classroom instruction may be provided online or by an employer, school district, the Wisconsin Technical College System, or a university. Each industry establishes statewide skill standards to determine what students should know to be successful in that particular industry. Upon completion of an apprenticeship program, students receive a Certificate of Occupational Proficiency as well as a high school diploma. In addition, depending upon the specific apprenticeship program, some students may receive technical college academic credit or may receive admission to some four-year colleges. Wisconsin has awarded approximately \$2 million in grants to WYA and has committed to increasing funding by \$500,000 annually to meet growing demand, with total funding for WYA estimated to be \$4.6 million over the next two years. Grants may be used to recruit employers, recruit students, coordinate youth apprenticeship activities, monitor student progress, and provide support services to students.

Some of the top industry sectors include agriculture, food and natural resources, architecture and construction, finance, health sciences, hospitality, lodging and tourism, information technology, transportation, distribution and logistics, and manufacturing. WYA requires employers to pay apprentices at least the minimum wage, with the potential for incremental wage increases, with progressive wage schedules over the term of the apprentice’s

contract with an employer. WYA does not offer tax incentives to employers for participation in the apprenticeship program.

Findings and Recommendations

Finding 1: Limited Employer Participation in Adult Apprenticeship Programs. After reviewing adult apprenticeship programs in the State and other apprenticeship program models, the task force finds that many employers do not participate in adult apprenticeship and that those who do have limited slots available for adult apprentices. In addition, many industries are not represented in the employer participation of apprenticeships. Over 80% of Maryland's registered apprentices are in a construction trade. Therefore, the task force recommends the State take several steps to attract employers to expand adult apprenticeship programs. To address this finding, the task force makes two recommendations.

Recommendation 1: Encourage the Division of Workforce Development and Adult Learning (DWDAL) within DLLR, the Governor's Workforce Investment Board (GWIB), and community colleges to obtain grants that can be targeted towards marketing apprenticeship programs for employers.

Recommendation 2: Explore tax credits for apprenticeship program employer participants through GWIB, the Department of Business and Economic Development (DBED), and DLLR to encourage the use of registered apprenticeship programs.

Finding 2: Limited Apprentice Enrollment. Although apprenticeship in the State was established over 50 years ago, adult apprenticeship participation is not maximized. Therefore, the State should adopt policies to increase the enrollment in and success of adult apprenticeship programs.

Recommendation 3: Require DBED, DLLR, GWIB, and MSDE to conduct a coordinated, statewide marketing effort to encourage adult participation in apprenticeships in various fields. DBED, DLLR, and GWIB should set targets for expanding the number of slots offered by employers as well as for increasing the percentage of apprentices working in sectors other than construction.

Recommendation 4: Require DWDAL, GWIB, and MSDE to develop and implement a diversity initiative to increase the diversity of apprentices.

Finding 3: Limited Scope of Youth Apprenticeship Programs. Youth apprenticeship programs in the State are not available in most schools. Only a few programs offer students the opportunity to earn credits towards a high school diploma while developing a specific skill set through apprenticeships. Therefore, the State should expand and further develop youth apprenticeship programs.

Recommendation 5: Establish defined pilot youth apprenticeship preparation programs in Baltimore City and Prince George’s County that align with Career and Technology Education programs of study by using appropriate curriculum from MSDE.

Assign and modify existing MSDE and community college curriculum to fit the needs of the pilot programs.

Require DLLR, DBED, and GWIB to identify skill standards in the industries selected for the pilot programs.

Promote the pilot programs using concentrated marketing to connect employers with the pilot programs.

Finding 4: No Entity Directly Oversees Youth Apprenticeship Programs. MATC serves as a regulatory and advisory entity for apprenticeships in the State. It does not, however, focus on the administration of youth apprenticeship programs. Because youth apprenticeship programs are multifaceted and involve high school and college curriculum challenges, the State should establish an advisory board to oversee youth apprenticeship programs.

Recommendation 6: Establish a Youth Apprenticeships Advisory Committee within DLLR that will consist of the following 11 members appointed by the Governor: the Secretary of Labor, Licensing, and Regulation, or the Secretary’s designee; the State Superintendent of Schools, or the Superintendent’s designee; the Secretary of Business and Economic Development or the Secretary’s designee; the Secretary of Juvenile Services, or the Secretary’s designee; the Commissioner of Labor and Industry, or the commissioner’s designee; two representatives from MATC, one of whom represents an employee organization, and one of whom is an employer that has a nonjoint apprenticeship program; a representative of the community college system; one member of the public who holds a doctoral degree specializing in labor economics with expertise in national and international apprenticeship systems; one member of the nonprofit community who is involved with employee training and workforce development; and a representative of the Maryland Chamber of Commerce.

Require the advisory committee to (1) evaluate the effectiveness of existing high school apprenticeship programs in Maryland, other states, and other countries, based on a systematic review of specified data; (2) review and identify ways to implement high school youth apprenticeship programs in the State; (3) review and identify ways that employers and organizations can obtain grants, tax credits, and other subsidies; and (4) report to the General Assembly each year any recommended legislation to promote high school apprenticeship programs in the State. In addition, the advisory committee should set targets for the number of apprenticeship opportunities for youth that Maryland should reach over the upcoming three years.

Conclusion

The need to expand and strengthen apprenticeship programs in the State, especially youth apprenticeship programs, is critical. Maryland should adopt best practices from other states and countries with apprenticeship programs such as South Carolina; Germany; and Manitoba, Canada to train more individuals for occupations requiring specialized skill sets. The task force believes that implementing the recommendations above will result in a more robust and effective apprenticeship program in the State.