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Progress Report

June 2004 **Report No. 04-42 (revised)**

Students Benefit from Workforce Education Programs, But Performance Can Be Improved

at a glance

Florida's workforce education programs are useful in preparing individuals to meet local labor market needs and in improving the incomes of participants. While overall completion rates are low, program completion has a significant positive impact on participant earnings.

To improve the effectiveness of programs we recommend that the Department of Education

- **work with local education agencies to increase participant completion rates and strengthen program accountability, and**
- **develop and implement standard procedures to assist in longitudinal program evaluation.**

Scope

As required by law, this progress report informs the Legislature of the status of recommendations made in prior OPPAGA reviews of the Workforce Education Program. [1] Using program completion, employment, and earnings data, this report also examines the

- statewide performance of the workforce development system;
- performance of individual workforce development programs; and
- relative cost-effectiveness and performance of programs administered by community colleges and school districts.

Background

Florida's workforce development system consists of a collaboration of organizations which provide training and employment services to enable people to be economically self-sufficient and provides Florida businesses with trained workers. Within this system, the Florida Department of Education's Office of Workforce Education partners with other workforce organizations to develop and deliver needed training programs for employment requiring less than a baccalaureate degree. As shown in Exhibit 1, although many providers deliver workforce training programs throughout the state, the majority of programs are offered through the state's community college and school district systems. These programs include college degree and credit programs, adult

[1] *Information Brief: Workforce Development System Overview,* Report No. 04-19, February 2004; *Special Examination: Review of the Workforce Development System,* Report No. 03-10, January 2003; *Program Review: Adult General Education Performance Improves; However, Placement Rates Need Improvement and the State's Residency Policy Needs Definition,* Report No. 02-33, June 2002; *Program Review: Apprenticeship Program is Beneficial, but its Ability to Meet State Demands is Limited,* Report No. 02-36, June 2002; *Justification Review: Workforce Development Education Program,* Report No. 02-32, May 2002; and *Workforce Development Education Program, Florida Department of Education,* Report No. 01-56, November 2001.

vocational certificate programs, and adult general and continuing workforce education programs. [2]

As shown in Exhibit 2, community colleges served 60% of the 202,343 students enrolled in career education programs during Fiscal Year 2002-03, the most recent year for which complete data are available. Over half (56%) of these students were enrolled in adult vocational programs offered by both school districts and community colleges.

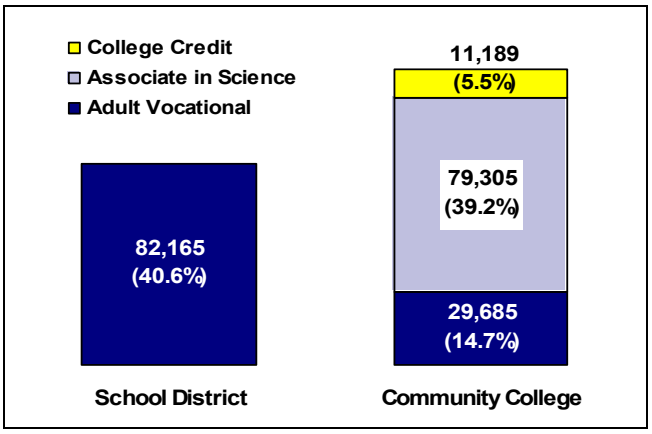
[2] Community colleges offer both degree and non-degree programs, while school districts offer programs primarily for non-degree seeking students. School districts recently have begun to offer applied technology diplomas which degree-seeking students can transfer for college credit.

Exhibit 1
Community Colleges and School Districts Offer a Variety of Workforce Programs

Workforce Education Program	Program Description	College Credit	Offered by Community Colleges	Offered by School Districts
Career Education Programs - Degree and College Credit				
Associate in Science Degree (AS)	The associate in science degree is given to those students who complete all the required courses for the vocational program in addition to general education classes (i.e., liberal arts and sciences). Examples of AS degree programs include nursing, midwifery, and dental hygiene.	X	X	
Associate in Applied Science Degree (AAS)	The associate in applied science degree is a two-year technical degree that typically contains 15-18 credit hours of transferable general education. Examples of AAS degree programs include nursing, legal assisting, and radiography.	X	X	
College Credit Certificate	The college credit certificate program is a short-term career education program which is part of an AS or AAS degree, consisting of the technical courses required for an AS degree but not the general education courses. Examples of college credit certificate programs include emergency medical technician, paramedic, and computer programmer.	X	X	
Applied Technology Diploma	An applied technology diploma program consists of courses that are part of an AS or AAS degree that leads to employment in a specific occupation, and may consist of either adult vocational certificate credit or college credit. Examples of these programs include medical coder and emergency medical technician.	X	X	X
Career Education Programs - Certificate				
Adult Vocational Certificate (PSAV)	Adult vocational credit certificate programs are designed to train students in technical skills that enable them to attain and sustain employment and realize economic self-sufficiency. Students who complete these programs are awarded vocational certificates. Examples of adult vocational programs include cosmetology, barbering, and masonry.		X	X
Apprenticeship	Apprenticeship programs are highly structured vocational skill training in a given job through a combination of on-the-job training and classroom instruction. Examples of apprenticeship programs include electrician, firefighting, and childcare development.		X	X
Other Workforce Education Programs				
Adult General Education	Adult general education is a comprehensive program comprised of adult basic education, adult secondary education, general educational development (GED) test instruction, and vocational preparatory instruction.		X	X
Continuing Workforce Education	The classification of instruction designed to improve the job skills of employed persons. It may be customized to a given employer and job or it may have broader applicability.		X	X
Vocational Preparatory Instruction	Adult general education through which persons attain academic and workforce readiness skills at the level of functional literacy (grade level 6.0 - 8.9) or higher so that such persons may pursue certificate career education or higher level career education.		X	X

Source: Florida Community Colleges and Workforce Education, *Glossary of Terms and Acronyms,* http://www.fldoe.org/CC/C, Florida Department of Education, February 2003.

Exhibit 2
Enrollment in Career Education Programs Exceeded 200,000 Students in Academic Year 2002-03



Note: Adult vocational counts include apprenticeship and applied technology diploma program enrollment.
Source: Florida Community Colleges and Workforce Education, Florida Department of Education, February 2003.

Workforce Development Education Programs are funded primarily by general revenue (see Exhibit 3). For Fiscal Year 2003-04, the Legislature appropriated $793.6 million for workforce education, of which $693.0 million, or 87%, is general revenue and $100.6 million, or 13%, is trust funds. Most of the funding is allocated to regional community colleges and local school districts for program delivery.

Exhibit 3
Workforce Education Programs Were Appropriated Nearly $800 Million in Fiscal Year 2003-04

Category	General Revenue	Trust Funds	Fund Totals, by Category
Community College Programs	$295,610,894		$295,610,894
School District Programs	378,849,510		378,849,510
Programs for Adults with Disabilities	18,508,431		18,508,431
Adult Basic Education[1]		$ 23,457,545	23,457,545
Vocational Formula Funds		77,144,852	77,144,852
Total Funding	**$692,968,835 (87%)**	**$100,602,397 (13%)**	**$793,571,232 (100%)**

[1] Includes federal grants, Title II of the Workforce Investment Act, Adult Education and Family Literacy.
Source: Chapter 2003-397, *Laws of Florida,* and Senate Bill 2A, Fiscal Year 2003-04.

Statewide Performance

We examined the statewide performance of the workforce development system to address two questions.

- How has the workforce development system performed in terms of program completion, employment and earnings outcomes?
- Has the system's performance changed over time?

Methodology. To evaluate statewide system performance, we examined the completion records for all student participating in any workforce degree or certificate program offered from 1997-98 to 2001-02. We calculated each student's wages for the year following graduation to determine their employment status and hourly wages. Using previously established criteria we rated performance of workforce programs offered from 1997-98 to 2001-02 using three performance measures. [3]

- **Number of Completers.** How many programs produced at least five completers statewide during the year?
- **Employment.** Did 50% or more of the program's completers report earnings for at least one quarter during the year following completion?
- **Earnings.** Did the program's full-time employed completers earn an average entry wage of at least $8.63 an hour? [4]

Programs that did not meet all three of the measures' benchmarks statewide were considered low performing.

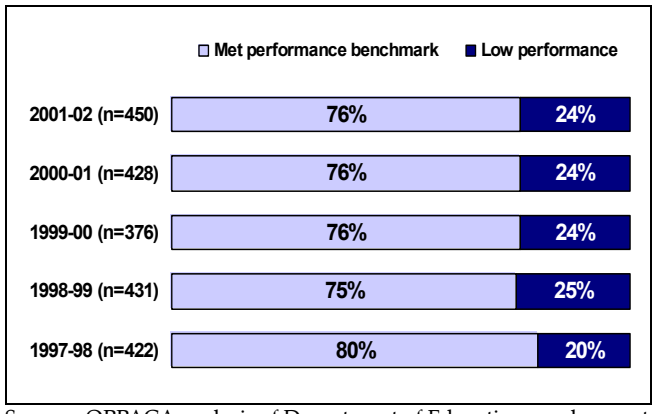
[3] See *Program Review: Workforce Development Education Program, Florida Department of Education,* Report No. 01-56, November 2001 and *Program Evaluation and Justification Review: Florida's Community College System,* Report No. 98-06A (Revised), March 1999.

[4] The entry-level wage benchmark of $7.50 an hour was established by the 1995-96 Occupational Forecasting Conference (see OPPAGA Report No. 98-06A Revised, page 32) and was adjusted for inflation in this study using 1995-96 as the base year. Full-time employment was defined as earning a minimum of $2,678 during a quarter, which is the equivalent of earning an hourly wage of $5.15 for 520 hours per quarter.

Over 75% of programs statewide have consistently met performance measures over the last five years

Over three-quarters of the state's workforce development programs are producing completers who are consistently finding jobs and earning reasonable wages. As shown in Exhibit 4, most programs (76%) produced at least five completers, had at least 50% of completers employed, and the average wage of program completers working full-time was at least $8.63 an hour. [5] These three performance measures have been relatively stable over the last five years, as shown in Exhibit 4, despite the downturn in the state's economy that began in 2000.

Exhibit 4
Statewide Program Performance Remains Relatively Strong; 76% of Programs Meet Expectations



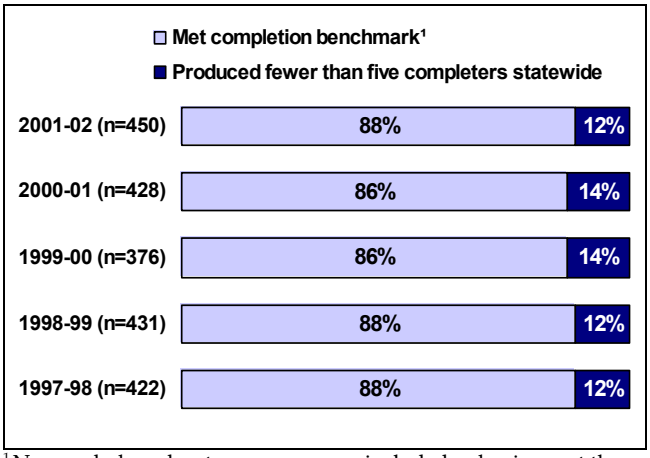
Source: OPPAGA analysis of Department of Education employment outcome data from Fiscal Years 1996-97 to 2001-02.

While these findings are encouraging, it is also important to examine how statewide programs performed on each of the three measures (number of completers, employment, and earnings).

Approximately 88% of programs produced five or more completions

A fundamental measure of workforce program success is program completions. Statewide, 88% of programs met the benchmark of producing five or more completions. [6] This figure has been fairly consistent over time. As shown in Exhibit 5, over the five-year period, between 12% and 14% of programs consistently produced fewer than five completers statewide. As this is statewide data, these results understate the number of local programs that produce small numbers of completers. For example, in 2001-02, six institutions offered an associate degree program in landscape technology. Of those six programs, only one produced five or more completers but the programs collectively produced 15 completers, thus meeting the statewide completion benchmark.

Exhibit 5
Most Programs (88%) Met the Statewide Completion Criterion in 2001-02



[1] New and phased-out programs were included as having met the statewide completion criterion.
Source: OPPAGA analysis of Department of Education student level completion data from Fiscal Years 1996-97 to 2001-02.

More than 90% of all programs had at least 50% of completers employed

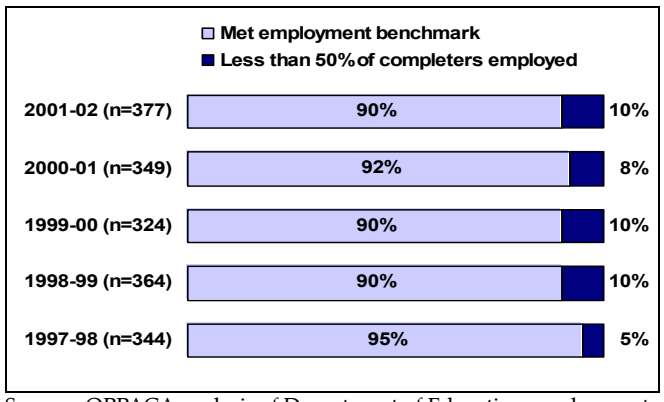
Another critical element of success for workforce programs is that graduates find employment. To determine whether programs met the employment benchmark of having at least 50% of graduates employed, we analyzed the quarterly

[5] Full-time employment was defined as earning a minimum of $2,678 during a quarter, which is the equivalent of earning an hourly wage of $5.15 for 520 hours per quarter.

[6] This analysis excludes new programs and those being phased out. New programs will have no completers until enrollees have had time to complete which depends on the length of the program. Likewise, programs that are being phased out may report a small number of completers for several years after enrollments are no longer being accepted as remaining students attempt to complete the program. From 1997-98 to 2001-02, approximately 14% of programs were classified as new or phased-out.

earnings of program completers the year following completion.[7] If completers had any wages reported in any quarter following completion, they were considered employed.[8]

Exhibit 6
More Than 90% of All State Programs Had at Least Half of Completers Employed



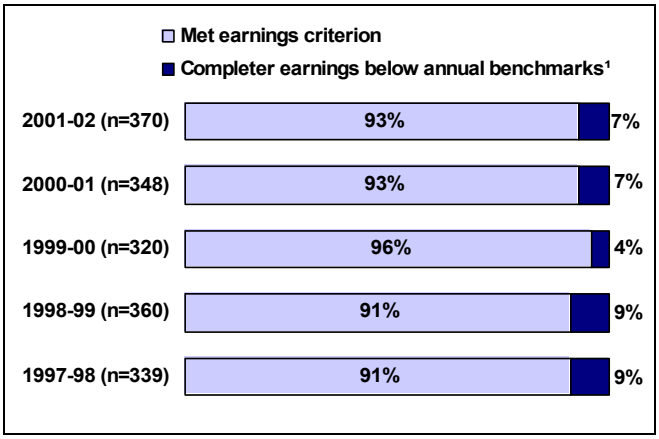
Source: OPPAGA analysis of Department of Education employment outcome data from Fiscal Years 1996-97 to 2001-02.

As seen in Exhibit 6, 90% of all programs statewide met the employment benchmark for Fiscal Year 2001-02. This rate was generally consistent over time, although a higher percentage of programs met the benchmark in Fiscal Year 1997-98. Employment performance is sensitive to shifts in supply and demand of the labor market. Florida's unemployment rate increased from 4.2% in 1998 to 5.5% in 2002.[9] Thus, the poor job market may explain the decline in the workforce system's performance on this measure.

Fully employed completers earned above the entry level wage benchmark in over 90% of programs

A third critical element of workforce program success is that graduates earn expected entry-level wages. In our statewide analysis, a program met the earnings benchmark if fully employed completers earned at least $8.63 an hour or the equivalent of $17,942 annually in 2001-02, the inflation-adjusted benchmark level established by the Occupational Forecasting Conference. This wage level is near the federal poverty threshold for a family of four, which was $18,104 in 2001-02.[10] As Exhibit 7 shows, over 90% of programs met this benchmark over the last five years.

Exhibit 7
Most Fully Employed Completers Earned Benchmark Wages



Source: OPPAGA analysis of Department of Education employment outcome data from Fiscal Years 1996-97 to 2001-02. *Annual adjusted hourly wage benchmarks include 1997-98 - $7.89, 1998-99 - $8.01, 1999-00 - $8.15, 2000-01 - $8.45, 2001-02 - $8.63.

While the system performed well, the benchmarks should be strengthened to make them more challenging

While the workforce development system has met the performance benchmarks, these standards are not ambitious. For example, the current employment measure counts any completer with post-completion earnings as a success, including persons who worked only a partial quarter or part-time. If employment performance is held to a higher standard that includes those persons earning full-time wages for at least one quarter after completing their program, the proportion of

[7] We were unable to determine the employment status of 20% of completers who had no wage information. We also had no information regarding whether or not completers are working in occupations for which they were trained.

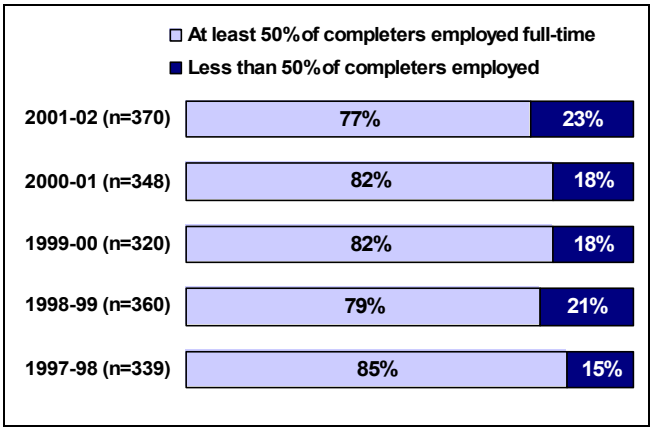
[8] The wages of completers with temporary identification numbers that could not be matched to wage data were excluded from the employment analysis. Approximately 1.3% or 2,719 students were assigned temporary identification numbers.

[9] U.S. Department of Labor, Bureau of Labor Statistics, Florida's seasonally adjusted unemployment rate July 1998, July 2002.

[10] U.S. Census Bureau, Poverty Thresholds 2001, Last Revised September 24, 2002.

low-performing programs would have more than doubled in 2001-02, as shown in Exhibit 8. [11]

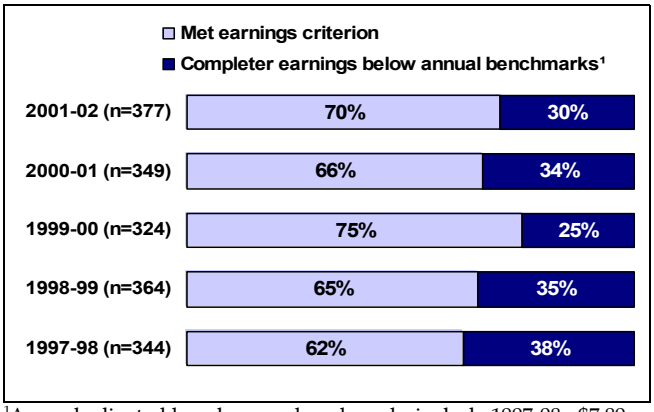
Exhibit 8
A Smaller Proportion of State Programs Had 50% of Employed Completers Earning at Least on Quarter of Full-Time Wages



Source: OPPAGA analysis of Department of Education employment outcome data from Fiscal Years 1996-97 to 2001-02.

Similarly, the earnings measure is limited because it uses a narrow definition of employment which only counts full-time workers. If the earnings measure were expanded to include all wage earners, the proportion of low performing programs would be considerably higher. When including all individuals having reported any wages during any quarter of the year following completion, almost a third (32%) of the programs would not have met this more challenging earnings benchmark over the five-year period (see Exhibit 9).

Exhibit 9
A Smaller Proportion of Programs Would Meet the Wage Benchmark If All Employed Completers Were Considered



[1]Annual adjusted hourly wage benchmarks include 1997-98 - $7.89, 1998-99 - $8.01, 1999-00 - $8.15, 2000-01 - $8.45, 2001-02 - $8.63.
Source: OPPAGA analysis of Department of Education employment outcome data from Fiscal Years 1996-97 to 2001-02.

Student Performance

In addition to assessing statewide workforce education program outcomes, we also examined student-level program results. Specifically, we examined cohorts of students that enrolled in workforce programs to track their educational and work status over time. We focused our review on four questions.

- How successful are students in completing workforce programs?
- To what extent are students training for desirable high-wage/high-skills and targeted occupations?
- What effect does program completion have on subsequent employment and earnings?
- What effect does the workforce system (community college versus school district) have on earnings success?

Methodology. To evaluate student performance, we tracked first time enrolled students within two cohorts: (1) students enrolled in *college credit* programs (associate of science or college credit certificate) at community colleges during the 1997-98 school year and (2) students enrolled in *adult vocational* programs (postsecondary adult vocational programs) at community colleges or

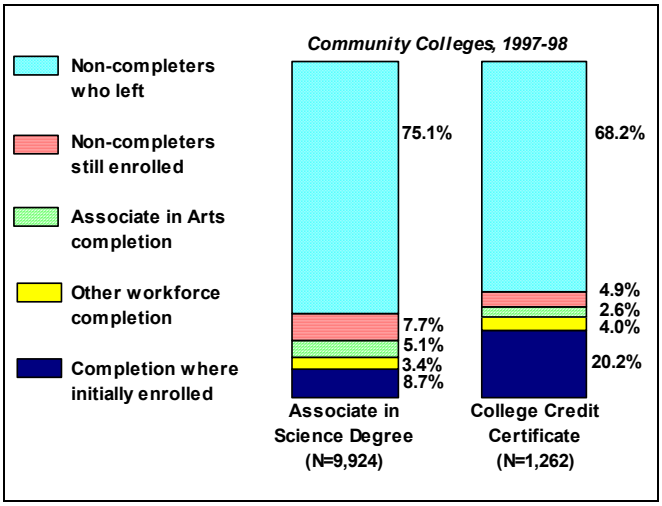
[11] The entry-level wage benchmark of $7.50 an hour was established by the 1995-96 Occupational Forecasting Conference (see OPPAGA Report No. 98-06A Revised, page 32) and was adjusted for inflation in this study using 1995-96 as the base year. Full-time employment was defined as earning a minimum of $2,678 during a quarter, which is the equivalent of earning an hourly wage of $5.15 for 520 hours per quarter.

school districts during the 1999-2000 school year. [12] We collected students' completion records through the 2001-02 school year and earnings records through the 2002-03 school year. We chose these cohorts to allow sufficient time for students to complete their respective programs and have at least four quarters of post-completion earnings to compare to their pre-enrollment earnings.

Most students fail to complete workforce development programs

The majority of students leave the workforce education system without finishing their programs, particularly those students taking college credit programs (associate in science and college credit certificate). For example, over three-quarters of Associate in Science enrollees failed to complete their programs and only 8.7% completed an Associate in Science degree (Exhibit 10).

Exhibit 10
Few Students Complete College Credit Programs

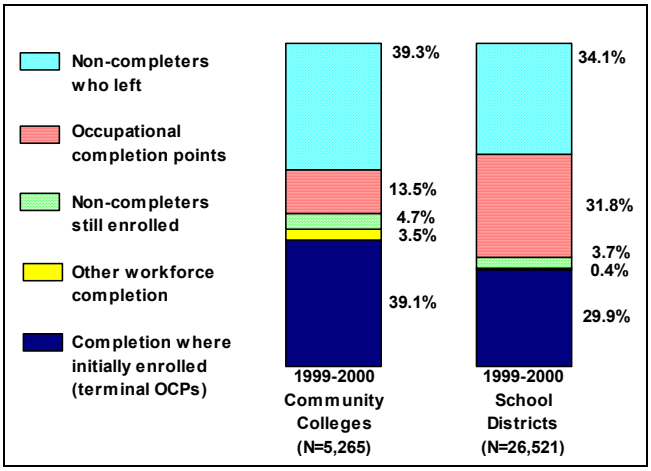


Source: OPPAGA analysis of Department of Education data on students who entered workforce development programs in the 1997-98 school year for the first time. Students awaiting limited access were removed from the analysis. We did not remove students who left the program to enroll in the university system, as these constitute a very small proportion of the population.

Low completion rates in college credit programs may be attributed to several factors. First, these programs are longer and have more demanding requirements than adult vocational programs. After four years, 7.7% of the Associate of Science students were still enrolled in the program. A high percentage of students enrolling in college credit programs are part-time students who are balancing work and school requirements. According to the Department of Education, two-thirds of college credit enrollees are part-time students. Additionally, the department reports that almost half of Associate of Science enrollees are economically or academically disadvantaged.

As shown in Exhibit 11, adult vocational program enrollees had higher completion rates than college credit enrollees, but more than half of these students either left their programs or earned only occupational completion points, which are levels of student accomplishment that are short of program completions. While not a completion, a student earning occupational completion points may obtain a marketable skill. [13] Almost a third of school district adult vocational students earned occupational completion points, but did not go on to finish the program.

Exhibit 11
Over Half of Adult Vocational Students Left Their Programs or Only Attained Partial Completion of a Vocational Certificate



Source: OPPAGA analysis of Department of Education data on students who entered workforce development programs in the 1999-00 school year for the first time.

[12] Apprenticeship programs were excluded from the analysis because these programs typically take longer to complete than traditional adult vocational programs.

[13] Occupational completion points (OCPs) were developed to identify benchmarks of student accomplishment in vocational programs. Students must attain a series of OCPs to fully complete all requirements of a vocational program. The final OCP in a program is known as the terminal OCP. Thus, when a student earns a terminal OCP, this signifies the completion of an adult vocational program.

The majority of program completions were in programs training for targeted and high skills/high wages occupations

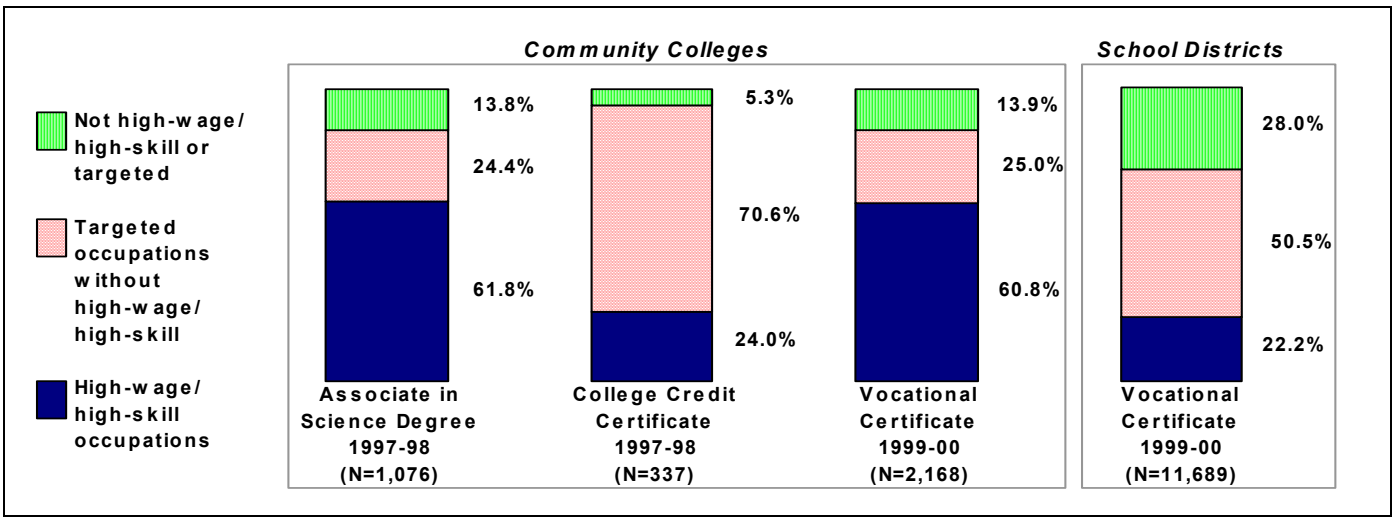
Section 1011.801, *Florida Statutes*, directs the State Board of Education to give highest priority to programs that train people to enter high-skill/high-wage occupations identified by the Workforce Estimating Conference. Conferees consider forecasts of job openings, employment, program placements, and earnings to determine high-demand, high-wage occupations.[14] In addition, the State Targeted Occupation List identifies programs that are intended to be targeted for training by local community colleges and school district vocational centers. For example, automotive mechanic is a targeted occupation because the predicted annual average demand for this occupation exceeds 100 job openings per year. Occupations on the list that exceed average wage thresholds, such as registered nurse, appear on the list as high-skill/high-wage occupations.

Consistent with the Legislature's intent, the majority of completions in workforce education programs prepared students for high-skill/high-wage and/or targeted occupations (see Exhibit 12). Sixty-two percent of associate in science degree completions and 61% of community college vocational certificate program completions were in programs for high skill/high wage occupations. An additional quarter of the completions in each of these programs were in occupations that were targeted but not high wage/high skill. In contrast, most college credit certificate and school district vocational program completions were in targeted occupations rather than high-skill/high-wage jobs.

However, a relatively high percentage of school district vocational program completions (28%) were not in either high-wage/high-skill or targeted occupations. This may be due, in part, to local school districts meeting regional demands for training in non-targeted occupations. Nonetheless, school districts with a small proportion of completions in high-wage/high-skill or targeted occupations may need to redirect their program resources toward offering training programs that meet projected regional demand for high-skill/high-wage occupations.

[14] The Department of Education's Workforce Estimating Conference determines wage thresholds for these occupations on an annual basis. The 2002-03 conference determined entry wages of $8 for targeted occupations and $10.48 for high-skills/high wages occupations. The definition of HSHW and TOL occupations also includes percentage growth and annual openings for occupations.

Exhibit 12
A Large Majority of Completions in All Programs Were in Either High-Skill/High-Wage or Targeted Occupations



Source: Workforce Estimating Data 2001-02, Florida Department of Education and OPPAGA analysis of Department of Education data on students who entered workforce development programs in the 1997-98 and 1999-00 school years for the first time, tracking completions through 2002-03. Students awaiting limited access were removed from the analysis. Completions in high-skill/high-wage occupations were identified by matching Classifications of Instructional Programs (CIPs) to those identified by the Conference in the 2001-2002 Regional Targeted Occupations List.

Program completions significantly improve employment and wages

Enrollees who did not complete their programs or who received only occupational completion points were less likely to have reported quarterly earnings (see Exhibit 13). [15] For example, 37% of the non-completers in school district adult vocational programs had no reported wages in 2002-03, compared to 26% of students who completed their programs. A similar pattern existed for participants of community college adult vocational programs, as 29% of non-completers had no reported quarterly earnings, compared to 17% of program completers. This suggests that program completion significantly improves students' chances of finding a job and that occupational completion points by themselves may not provide students with marketable skills that will get him or her employed.

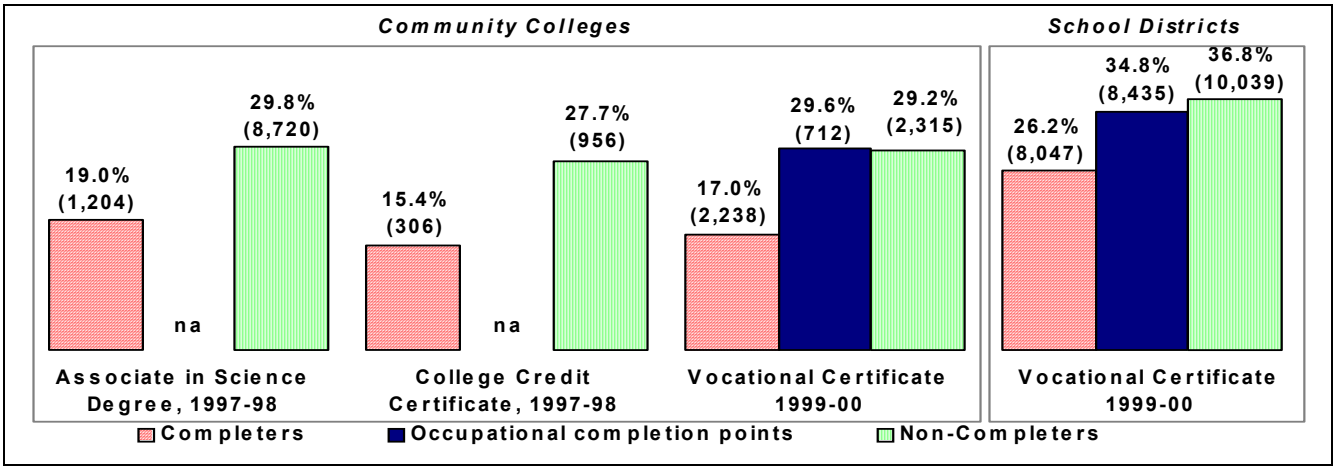
Program completion was also associated with higher post-enrollment wages. Exhibit 14 shows the percentage of students who attained wages above the 2002-03 benchmark of $10.48 per hour. [16] Persons who completed programs were significantly more likely than non-completers to earn high wages. [17]

[15] This indicator of earnings provided by the Department of Education's Florida Education and Training Placement Information Program (FETPIP) is somewhat incomplete as it includes only individuals who were covered by unemployment insurance and excludes those who are self-employed, some employees of the Federal government, individuals who were enrolled in continuing education programs, or who moved from the state or were incarcerated.

[16] 2002-03 Workforce Estimating Conference entry-level wage benchmark for targeted, high-wage/high-skill occupations.

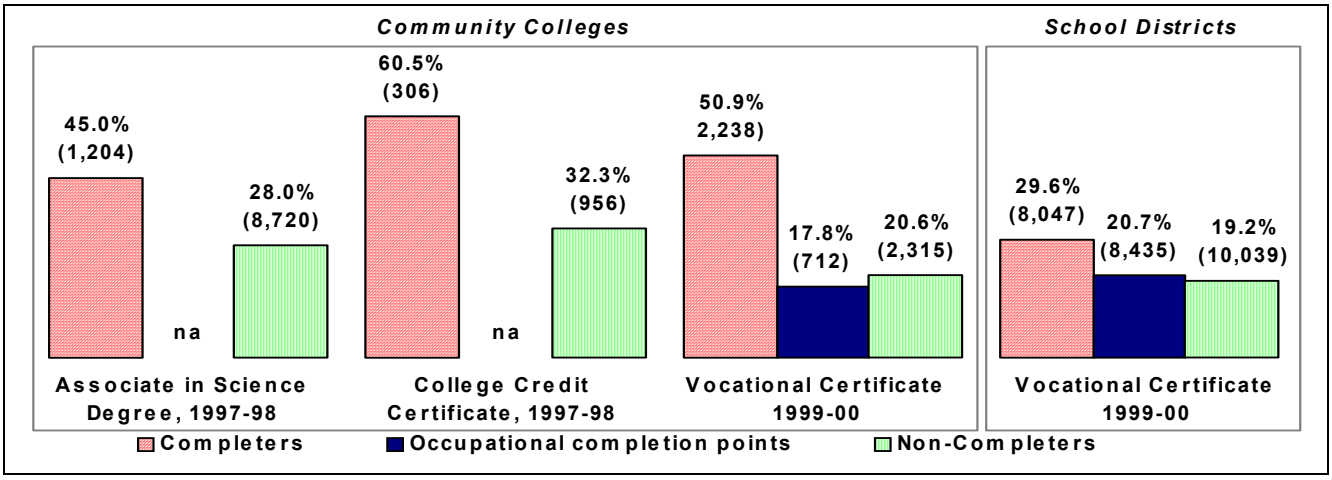
[17] We applied the benchmark for the year 2002-03, since this corresponds to the year of the wages we evaluated.

Exhibit 13
Approximately 30% of Students Who Failed to Complete Programs Had No Reported Wages Three to Five Years After Enrollment



Source: Workforce Estimating Data 2002-03, Florida Department of Education and OPPAGA analysis of Department of Education data on students who entered workforce development college credit and vocational programs in the 1997-98 and 1999-00 school years for the first time. Students awaiting limited access were removed from the analysis.

Exhibit 14
Program Completers Were Considerably More Likely Than Non-Completers to Earn Wages Above 2002-03 High-Skill/High-Wage Entry-Level Benchmarks



Source: OPPAGA analysis of Department of Education data on students who entered workforce development college credit and vocational programs in the 1997-98 and 1999-00 school years for the first time. Students awaiting limited access were removed from the analysis.

In addition to affecting wage levels, program completion also had a profound effect on earnings improvement (see Exhibit 15). For those students who were employed prior to enrollment, persons who completed programs attained greater earnings improvements than those students who did not complete programs or who received occupational completion points only. For example, students who completed an associate in science degree achieved a 167% median increase in earnings after completing their programs, while non-completers attained a median increase of 103%. This pattern of improved earnings was consistent for completers across all programs.

Students who earned college credit certificates attained the highest median earnings, which was likely due to the fact that attaining certification is required for employment in some higher paying occupations, such as in network systems development, computer programming, and paramedics. Even though the median earnings of recipients of associate degrees were not as high as those for recipients of college credit and community college vocational certificates, they experienced a higher increase in earnings. This may be attributed to the younger age of entering associate degree students and their corresponding limited earnings histories prior to entering training programs. [18]

Students who attained occupational completion points without completing a program earned wages that were only marginally better than non-completers. This suggests that students who earn occupational completion points without completing a program may not be obtaining the marketable skills necessary to secure the higher earnings gained by students who completed the programs.

[18] We used regression analysis to adjust for outside factors that might affect post-program earnings, such as prior earnings and demographics, and found that, even after accounting for these factors, completing a program resulted in significantly higher earnings and a greater increase in earnings.

Exhibit 15
Students Who Completed Programs Experienced Greater Improvements in Earnings Than Non-Completers or Students Who Earned Occupational Completion Points

Local Provider	Program Completers		OCP Completers		Non-Completers	
	Median Post-Completion Earnings[1]	Median Earnings Increase	Median Post-Completion Earnings[1]	Median Earnings Increase	Median Post-Enrollment Earnings[1]	Median Earnings Increase
Community Colleges						
Associate in Science Degree (1997-98 cohort)	$24,609	167.2%	N.A.	N.A.	$18,721	102.8%
College Credit (1997-98 cohort)	31,355	144.8%	N.A.	N.A.	20,718	70.5%
Adult Vocational Certificate (1999-2000 cohort)[2]	27,803	67.4%	$15,483	30.3%	14,870	33.3%
School Districts						
Adult Vocational Certificate(1999-2000 cohort)	$18,990	59.1%	$16,304	30.9%	$15,397	28.0%

Note: Includes only individuals who earned wages both prior to program enrollment and after program completion. Cases "Awaiting Limited Access" were removed.
[1] Earnings data comes from the Department of Education, Florida Employment Training Information Program and is based on four quarters (Quarter 2 of 2002 through Quarter 1 of 2003).
[2] Including general freshmen.

Source: OPPAGA analysis of Department of Education data on students who entered workforce development programs in the 1997-98 and 1999-2000 school years that lead to degrees or certificates.

Community college students have somewhat better earnings success than comparable school district students in adult vocational programs

Community college adult vocational students attained higher post-completion earnings than comparable school district vocational students. As shown in Exhibit 15, the median earnings for the community college student cohort was $27,803 compared to $18,990 for the school district cohort, a difference of $8,800. In order to determine whether this result may have been affected by differences in program mix or student characteristics, we performed a regression analysis on those adult vocational certificate occupational programs that were offered by both community colleges and school districts, adjusting for factors such as prior earnings and demographics.[19] Even when these factors are accounted for, a typical community college completer earned $3,200 more than a typical school district completer. We were unable to measure other factors that might explain earnings differences between the groups, such as prior educational attainment or whether students in one system were more motivated than the other. Nevertheless, these findings suggest that employers may be willing to pay higher wages for a community college completer than a comparable school district completer.

[19] Factors entered into the regression equation include gender, race, age, prior wages, occupation type (high-skill/high-wage, targeted, or other), and workforce region.

Local Education Agency Performance

In addition to statewide and student outcomes, it is also important to examine the cost-effectiveness of local education agencies—school districts and community colleges—in delivering workforce programs. Local education agencies decide what workforce programs are offered and how state tax dollars are spent.

Methodology. To assess local education agency performance, we developed a model comparing the relative efficiency of institutions that deliver the same type of programs. We used the performance criteria of completions, employment, and earnings, as well as information to identify targeted occupation programs and expenditures for each individual institution. We also examined the employment status of students who completed programs in Fiscal Year 2001-02 and four quarters of their employment and earnings (through June 2003).

Our model groups institutions by the type of programs they offer (community college adult vocational certificate, school district adult vocational certificate, associate degree, and college credit certificate) as well as the number of students enrolled (large versus small institutions). For each group of agencies, the model uses benchmarks to score the relative efficiency of the institutions delivering those types of programs:

- cost per completion for adult vocational certificate programs,
- percentage of completers finding employment,
- average wage for fully employed completers,
- percentage of programs producing fewer than five completers,
- percentage of programs on the targeted occupations list, and
- percentage of programs on the high skill/high wage list.

The model compared each institution's data to the appropriate benchmarks and scored each institution by counting the number of times the institution met or exceeded the benchmarks. Appendix A provides tables for each of the workforce career education programs, including school district adult vocational programs (Table A-1), community college adult vocational programs (Table A-2), associate in science degree (Table A-3), and college credit programs (Table A-4). The Department of Education does not collect data that separately identifies the costs for associate of science degree programs and community college credit programs. Consequently, we could not assess the cost per completion for these two types of programs.

While local education agency performance varies, some programs clearly perform better than others

In our analysis of career education programs, we found that 45% of programs offered by school districts and community colleges produced fewer than five completers in 2001-02. Moreover, only 5% of all programs produced 56% of completers statewide. These facts illustrate that many of the programs offered by community colleges and school districts may not be efficiently producing graduates.

To identify where inefficiencies exist, we designed a model to summarize the performance of community colleges and school districts in delivering workforce career education programs. Our model found wide variation in the reported cost per completion, percentage of programs producing five or more completers, and the percentage of high-wage/high-skill programs offered. Appendix A provides the performance data for each local education agency by career education program.

Many local education agencies offer programs that produce fewer than five completers. As could be expected, this was particularly true for the smaller community colleges and school districts. For example, of the 20 associate in science programs offered at South Florida Community College, 80% produced fewer than five completers (see Table A-3). However, some large institutions also had relatively high percentages of low completion programs. For example, approximately half of Palm Beach, Brevard, and Miami-Dade Community Colleges' adult vocational programs produced fewer than five completers (see Table A-2). The costs and benefits of offering low completion programs should be considered carefully when determining how to allocate scarce resources. For example, local demand for specialized occupational training should be a primary consideration in determining which programs to offer.

Our model also found variations in the reported cost per completions between institutions offering the same types of programs. For example, the median cost per completion for adult vocational certificate programs offered by larger school districts was $4,785 (see Table A-1). However, the reported cost per completion for Miami-Dade, Osceola, and Charlotte were higher—$8,214, $5,355, and $5,247, respectively. School districts and community colleges with higher costs per completion generally have a higher proportion of programs that produce fewer than five completers. For example, a relatively high percentage (73%) of Osceola school district adult vocational certificate programs produced fewer

than five completers in 2001-02 which may account for its significantly high cost ratio.

Ideally, programs offered at local institutions are driven by regional demand for trained workers. However, many institutions were not offering training programs to prepare students for the high-wage/high-skill jobs that were projected on their respective regional targeted occupation lists. For example, while a median of 22% of the targeted vocational programs offered by larger school districts were categorized as high-wage/high-skill occupations, only 8% of Miami-Dade County School District's 98 vocational programs fell into the high-wage/high-skill category for the region (see Table A-1).

It should be noted that our model did not indicate whether local training programs are worthy investments of state funds. For example, some specialized occupational programs with low enrollments, such as Citrus Production Technology, may not have the enrollment to support five or more completions but may serve an important function in the Florida economy. In addition, some institutions may be offering more new programs than other institutions and thus would not be expected to produce as many completers. Because some occupational training programs are more costly than others, cost per completion may vary depending on the mix of programs offered at individual institutions. For instance, training students in occupations like automotive repair that require expensive equipment is more costly than training them in occupations conducted in traditional classroom settings like private security guard training. There may be other legitimate reasons why local education agencies have relatively poor performance results using our model, including regional differences in job markets and earnings. However, the model is useful for local education agencies to identify how efficiently they deliver career education programs relative to their peers. By identifying strengths and weaknesses, administrators can work together to develop strategies to deliver programs that maximize the benefit to the communities they serve.

School district and community college administrators should ensure that programs that consistently produce small numbers of completers are serving critical community needs. Discontinuing low completion programs may be especially critical at institutions where students are waiting to enroll in high-demand training programs, such as nursing, which must often limit enrollment due to a lack of resources. Therefore, we recommend that the Department of Education and local education agencies include cost-effectiveness data in the publications regularly disseminated to the State Board of Education and stakeholders. In addition, the Legislature should require that local program administrators either eliminate or justify the continuation of low-performing programs in order to ensure that school districts and community colleges offer programs that provide the greatest benefit to the communities they serve.

Data Issues

The Florida Department of Education collects a wealth of data that is reported from a variety of sources. For our analysis we linked student, program, occupation, and expenditure data to provide a more complete picture of program delivery and student outcomes. In linking data sets we found anomalies in completion data reported by school districts and community colleges. We also discovered that it is difficult to analyze program performance over time with the current practices used by the Florida Department of Education to track state sanctioned instructional programs.

Inconsistencies exist in local education agency reporting practices

In our analysis of expenditure and completion data, we found variation in cost per completion values among local education agencies. For example, in Table A-1, the median cost per completion for the larger school district adult vocational certificate programs was $4,380. However, cost per completion varied widely ranging from $937 to $8,214 per completion. Such wide variation may be the result of reporting inconsistencies rather than true representations of cost per completion. For example, the community colleges and school districts have different methods of reporting expenditure data. School district expenditures represent total direct costs as

reported by each district. Community college expenditures represent total direct instructional costs as reported by each community college. While both methods are acceptable, they may not include all of the same cost categories.

We also determined that one of the largest local education agencies in the state had reported thousands of completions in Fiscal Year 2001-02 to correct for data reporting problems that occurred in prior years. The department accepts completion records from local education agencies at any time and assumes that those completions occurred in the year in which they were reported. However, this is not always the case. This can result in an inaccurate count of completions for an institution in a particular year. With assistance from Department of Education personnel who are familiar with local reporting processes, we were able to remove the affected records from our analysis.

Reporting inconsistencies also limited our analysis of completion rates for Classifications of Instructional Programs (CIP). [20] Contrary to DOE guidelines, some local education agencies are crediting course completions to more than one CIP for the same student. In certain instances, a course was applicable to more than one instructional program and may have been the result of a student taking a course but not yet selecting an instructional program. This reporting practice essentially credits students for multiple courses when they only attained one completion. We were not able to identify the prevalence of this practice because we could not separate instances of multiple counting from cases where a student legitimately earns more than one completion. These coding problems also prevent the department from accurately tracking completions at the CIP level for program management purposes and identifying programs with low completions that may not be cost-effective to fund. [21]

Program performance could be more easily measured by implementing standard procedures for classifying and tracking program data

In our analysis of program data, we found that the current practice of manually tracking changes to the state program inventory makes it difficult for the Florida Department of Education and local education agencies to assess performance over time. For example, when a program is restructured or merged into an existing occupational classification, the performance history of both programs is lost. Currently, in order to accurately assess performance over time special algorithms have to be developed to differentiate among students in programs with CIP codes that have changed from year to year. To retain and track program histories, new and restructured programs should be assigned unique identifiers and the programs that are merged should be phased out with their respective CIP codes intact.

To address these issues, the Department of Education should develop written procedures for classifying and tracking instructional programs and, when procedures are in place and resources are available, the department should automate inventory tracking. Although the classification of instructional programs is defined in the *Student Database Handbook,* implementing a standard procedure for assigning CIP codes and unique identifiers will allow program managers to more easily track the relative performance of new, merged, and restructured programs over time. [22]

Developing and implementing standard procedures for tracking occupational programs statewide is important to improve program accountability. With well defined procedures in place, reports can be developed to track the progress of a single program or a group of

[20] Classification of Instructional Programs (CIP) is a 10-digit number assigned to a specific set of courses that constitute an instructional program.

[21] In our cohort analysis, to avoid counting course completions that were credited to more than one instructional program, a completer was defined as any student who received credit for one or more completion within the same program type. In this way we were able to calculate completion rates for each program type including associate in science, college credit certificate, community college adult vocational, and school district adult vocational programs.

[22] Student Database Version 15.0, July 1, 2003, pp. 107-109.

programs over time. The reports should include data elements identifying the program start date, length, enrollment by year, number of completers, phase-out date, and program status. These reports should be readily available for periodic review by program managers and be in a format that will allow them to assess program performance over time. By periodically analyzing the information contained in these reports, program managers should be able to recognize outstanding programs, be proactive in assisting struggling programs, and be able to document recommendations regarding the continuation of poor performing programs.

Conclusions and Recommendations

In order to improve the effectiveness of workforce development programs, we recommend that the department work with local education agencies to increase participant completion rates and strengthen program accountability.

In order to ensure workforce development funding is used cost-effectively, we recommend that the Department of Education develop and implement an empirically based strategy to identify low-performing programs offered at local education agencies and require local program managers at school districts and community colleges to justify the continuation of low-performing programs.

To improve the quality of completion data collected by local education agencies, we recommend that the Department of Education specifically assign data quality responsibilities to an entity within the department. These responsibilities should include working with the local education agencies to improve data collection and reporting efforts and developing and implementing strategies that allow local program managers to easily track program performance over time. These strategies should include the development of written procedures to ensure consistently applied unique classification of all instructional programs and automated procedures that will assist program managers in assessing program performance over time.

Agency Response

In accordance with the provisions of s. 11.51(6), *Florida Statutes,* a draft of our report was submitted to the Commissioner of Education for his review and response.

The Commissioner written response is available on OPPAGA's website.

OPPAGA supports the Florida Legislature by providing evaluative research and objective analyses to promote government accountability and the efficient and effective use of public resources. This project was conducted in accordance with applicable evaluation standards. Copies of this report in print or alternate accessible format may be obtained by telephone (850/488-0021 or 800/531-2477), by FAX (850/487-3804), in person, or by mail (OPPAGA Report Production, Claude Pepper Building, Room 312, 111 W. Madison St., Tallahassee, FL 32399-1475).

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Appendix A

Comparisons Across Local Education Agencies

Because the unique mix of occupational programs offered at each institution prohibits analyzing every individual occupational program, we developed a model to compare the relative efficiency of institutions that deliver the same types of programs. To develop our model, we used the criteria of program completion, employment, and earnings as well as whether programs are in targeted occupations and the expenditures for each community college and school district.[23]

The model groups institutions by the type of programs they offer, i.e., community college adult vocational certificate, school district adult vocational certificate, associate degree, and college credit, and by the number of students enrolled. For each group of agencies, we develop a set of benchmarks that are used to "score" the efficiency of the institutions delivering those types of programs relative to each other.

For example, school districts offering adult vocational certificate programs are divided into two groups. One group consists of institutions offering programs with relatively small enrollment while the other consists of institutions with relatively large enrollments. [24] (See Table A-1.) For each group we compute medians to develop a set of benchmarks that includes

- cost per completion (Table A-1 and A-2 only),
- percentage of completers finding employment,
- average wage for fully employed completers,
- percentage of programs producing less than five completers,
- percentage of programs on the targeted occupations list, and
- percentage on the high skill/high wage list.

The model compared each institution's data to the appropriate benchmarks and scored each institution by counting the number of times the institution met or exceeded the benchmarks. For example, the last column of Table A-1 shows that Manatee and Wakulla school districts met or exceeded all 6 benchmarks indicating that they are delivering adult vocational certificate programs more efficiently than other districts which met fewer benchmarks. The Department of Education does not collect data that separately identifies the costs for community college associate degree and college credit programs. Consequently, we could not identify the cost per completion of these programs, and Tables A-3 and A-4 address the remaining five benchmarks.

[23] Program Cost Analysis Series File No. 05.187-1 2001-02, Florida Department of Education, December 2003, Florida Community College System 2001-02 Cost Analysis Summary, May 2003.

[24] Groups were created by determining the enrollment median and then dividing the LEAs evenly into two groups. The small enrollment group contains LEAs with enrollment less than the median, large enrollment groups contain the LEAs with enrollment greater than or equal to the median. Medians were used because of the large variations in enrollment across the LEAs.

Table A-1
School Districts, Adult Vocational Certificate Programs

Local Education Agency	Cost Per Completion	Total Number Enrolled	Total Number of Completers	Percentage Finding Employment[a]	Average Wage for Completers[b]	Total Number of Programs	Percent with Less Than Five Completers	Percent on Targeted Occupation List	Percent on High Skill / High Wage List	Number of Categories Meeting Benchmark[c]
Large Programs										
Group Medians	**$4,380**			**75%**	**$11.65**		**39%**	**58%**	**22%**	3.0
Broward	4,380	7,361	2,742	75	12.92	76	28	58	18	4
Charlotte	5,247	1,012	341	81	9.36	30	50	67	27	3
Citrus	3,030	966	456	84	10.47	23	39	70	35	5
Collier	4,517	1,244	466	75	12.18	32	41	47	22	2
Dade	8,214	18,640	2,626	68	12.79	98	40	53	8	1
Escambia	3,949	1,214	348	69	11.12	43	49	56	26	2
Hillsborough	2,466	10,460	2,523	74	10.93	67	34	57	19	2
Lake	3,978	1,878	710	84	11.31	40	35	63	20	4
Lee	4,893	1,823	661	85	15.09	53	47	60	34	4
Leon	4,946	1,986	577	75	11.65	46	43	43	17	2
Manatee	3,224	2,623	898	84	12.02	53	32	58	28	6
Marion	2,162	1,223	453	73	10.27	21	33	52	14	2
Orange	1,651	8,443	3,663	70	11.96	79	24	62	16	4
Osceola	5,355	1,200	242	77	12.84	30	73	53	23	3
Pinellas	4,597	5,687	1,506	74	12.26	58	28	59	26	4
Polk	937	1,750	930	84	11.04	47	45	66	38	4
Washington	4,443	1,323	518	67	9.93	34	38	59	21	2
Small Programs										
Group Medians	**$4,785**			**74%**	**$11.18**		**49%**	**61%**	**18%**	3.0
Bay	7,812	747	238	71	11.00	39	67	64	36	2
Bradford	4,505	405	95	74	11.18	11	45	45	9	4
Clay	192	268	111	66	7.69	1	0	0	0	2
Desoto	11,936	75	18	83	11.44	5	80	40	20	3
Dixie	2,534	18	7	100	12.77	1	0	100	0	5
Flagler	2,347	775	217	64	13.00	19	74	42	11	2
Gadsden	30,937	95	3	100	10.21	7	100	86	29	3
Indian River	2,600	361	99	79	10.56	7	43	71	14	4
Monroe	9,770	141	17	59	12.64	12	83	33	25	2
Okaloosa	5,834	791	199	56	10.56	25	40	60	28	2
Palm Beach	274,032	5	1	.	.	1	100	100	0	3
Pasco	5,065	884	69	67	9.35	19	79	63	16	1
Santa Rosa	1,580	421	143	66	9.52	16	31	63	13	3
Sarasota	8,200	930	377	85	13.11	38	39	55	26	4
Taylor	1,814	903	300	77	15.79	21	52	52	24	4
Wakulla	1,323	88	35	89	13.97	3	33	67	33	6

[a] Percentage of completers with any reported wages during the year following program completion.

[b] Average wage for completers earning the equivalent of at lease full-time minimum wage (i.e., $2,678 in a quarter).

[c] Benchmarks as follows: <= median cost/completion, >=% finding employment, >= average wage, <= % less than 5 completers, >= % TOL, >= % HS/HW.

Table A-2
Community Colleges, Adult Vocational Certificate Programs

Local Education Agency	Cost Per Completion	Total Number Enrolled	Total Number of Completers	Percent Finding Employment[a]	Average Wage for Completers[b]	Total Number of Programs	Percent with Less Than 5 Completers	Percent on Targeted Occupation List	Percent on High Skill / High Wage List	Number of Categories Meeting Benchmark[c]
					Large Programs					
Group Medians	**$3,699**			**73%**	**$13.15**		**35%**	**69%**	**36%**	3.0
Brevard	4,053	1,249	448	77	12.55	41	51	66	37	2
Central Florida	4,344	793	343	64	11.62	16	19	56	31	1
Daytona Beach	3,181	1,145	668	83	11.31	23	35	78	35	4
Florida at Jacksonville	3,699	3,983	1,134	57	14.66	58	43	62	34	2
Indian River	3,909	3,229	1,128	71	12.78	39	46	69	36	2
Lake City	2,935	2,032	312	76	12.39	13	23	62	38	4
Miami-Dade	4,255	4,397	964	69	17.59	41	49	76	34	2
Palm Beach	5,259	3,579	616	65	17.17	41	51	76	37	3
Seminole	3,248	1,643	541	73	14.75	28	43	75	39	5
South Florida	2,646	1,268	580	66	12.16	29	31	59	31	2
Valencia	4,600	828	304	86	15.18	7	29	71	71	5
Hillsborough	866	1,972	1,169	84	13.15	13	0	62	46	5
Pasco-Hernando	2,989	697	340	84	13.40	20	30	85	35	5
					Small Programs					
Group Medians	**$3,512**			**85%**	**$13.08**		**33%**	**82%**	**42%**	3.0
Chipola	4,020	526	254	87	11.32	14	21	64	43	3
Edison	2,731	17	3	.	.	1	100	100	0	4
Florida Keys	2,339	133	65	92	23.57	3	33	67	67	5
Gulf Coast	2,644	676	324	56	11.03	14	57	86	43	3
Broward	3,512	387	414	69	19.27	12	17	83	42	5
North Florida	4,755	419	190	83	12.42	16	38	63	50	1
Okaloosa-Walton	2,749	541	116	88	12.01	15	73	67	33	2
Pensacola	5,513	603	290	76	9.53	16	19	56	6	1
Polk	3,489	172	167	98	14.60	5	60	100	60	5
Santa Fe	5,558	311	256	76	12.40	11	27	82	36	2
St. Johns River	4,214	663	124	92	14.44	13	69	62	38	2
St. Petersburg	3,340	23	20	100	13.74	1	0	100	100	6
Tallahassee	4,132	376	314	84	14.30	9	22	89	33	3

[a] Percentage of completers with any reported wages during the year following program completion.

[b] Average wage for completers earning the equivalent of at lease full-time minimum wage (i.e., $2,678 in a quarter).

[c] Benchmarks as follows: <= median cost/completion, >=% finding employment, >= average wage, <= % less than 5 completers, >= % TOL, >= % HS/HW.

Table A-3
Community Colleges, Associate of Science Degree Programs

Local Education Agency	Total Number Enrolled	Total Number of Completers	Percent Finding Employment[a]	Average Wage for Completers[b]	Total Number of Programs	Percent with Less Than 5 Completers	Percent on Targeted Occupation List	Percent on High Skill / High Wage List	Number of Categories Meeting Benchmark[c]
Large Programs									
Group Medians			**85%**	**$16.49**		**40%**	**71%**	**51%**	**2.0**
Brevard	4,249	335	84	15.67	38	53	74	66	2
Daytona Beach	7,547	406	83	15.88	39	36	74	59	3
Florida at Jacksonville	8,498	646	85	16.66	53	40	68	43	3
Gulf Coast	2,609	202	82	14.05	25	40	80	64	2
Indian River	5,407	344	89	16.34	38	34	71	53	3
Broward	5,610	834	85	22.71	52	42	71	40	2
Miami-Dade	6,903	1,062	84	22.51	59	39	58	39	2
Palm Beach	5,232	348	84	20.01	36	58	67	50	1
Pensacola	8,016	491	80	12.15	42	36	71	50	2
Seminole	4,251	304	85	16.63	30	37	80	57	5
Saint Petersburg	6,015	579	86	16.66	48	54	67	52	3
Tallahassee	3,061	127	80	14.63	24	67	88	71	2
Valencia	7,725	549	87	16.34	33	30	76	48	3
Hillsborough	6,652	480	86	17.55	44	43	64	45	2
Small Programs									
Group Medians			**85%**	**$15.04**		**55%**	**80%**	**57%**	**2.0**
Central Florida	1,774	192	79	14.04	29	59	79	59	1
Chipola	266	54	54	13.20	14	79	86	71	2
Edison	1,483	271	93	18.83	20	30	85	60	5
Florida Keys	434	43	72	21.79	9	78	78	56	1
Lake City	512	104	86	14.14	16	56	56	50	1
Lake Sumter	1,099	122	92	15.47	15	53	87	53	4
Manatee	1,469	212	85	17.32	25	52	80	56	3
North Florida	128	14	86	12.14	7	86	71	57	2
Okaloosa-Walton	2,124	234	51	10.93	22	32	82	55	2
Polk	1,861	205	90	17.28	21	48	71	52	3
Santa Fe	1,547	559	78	14.61	28	29	71	61	2
South Florida	739	57	86	14.43	20	80	70	60	2
Saint Johns River	1,411	124	79	15.69	21	57	81	57	3
Pasco-Hernando	1,662	198	88	15.57	17	35	94	88	5

Note: Cost per completion cannot be calculated for Associate of Science programs because the data are not separately reported by the Department of Education.

[a] Percent of completers with any reported wages during the year following program completion.

[b] Average wage for completers earning the equivalent of at lease full-time minimum wage (i.e., $2,678 in a quarter).

[c] Benchmarks as follows: <= median cost/completion, >=% finding employment, >= average wage, <= % less than 5 completers, >= % TOL, >= % HS/HW

Table A-4
Community Colleges, College Credit Certificate Programs

Local Education Agency	Total Number Enrolled	Total Number of Completers	Percent Finding Employment[a]	Average Wage for Completers[b]	Total Number of Programs	Percent with Less Than 5 Completers	Percent on Targeted Occupation List	Percent on High Skill / High Wage List	Number of Categories Meeting Benchmark[c]
Large Programs									
Group Medians			**88%**	**$14.24**		**48%**	**65%**	**27%**	**3.0**
Brevard	321	207	87	12.52	8	50	75	25	1
Daytona Beach	448	163	87	12.80	8	38	75	38	3
Florida at Jacksonville	596	149	88	14.63	11	64	45	9	2
Indian River	660	353	89	12.34	12	25	67	33	4
Broward	1,045	525	89	21.78	15	47	53	27	3
Miami-Dade	1,073	100	85	15.94	13	77	62	8	1
Okaloosa-Walton	537	44	64	9.95	8	50	63	38	1
Palm Beach	459	58	98	25.07	3	67	100	0	3
Seminole	462	241	90	14.77	9	44	56	22	3
Saint Petersburg	3,001	733	85	16.49	24	42	42	21	2
Tallahassee	451	55	95	12.52	7	57	100	43	3
Valencia	945	515	87	13.42	8	13	75	38	3
Hillsborough	924	230	87	14.92	11	82	55	27	2
Pasco-Hernando	371	130	88	13.85	8	25	100	38	4
Small Programs									
Group Medians			**87%**	**$13.31**		**60%**	**83%**	**33%**	**3.0**
Central Florida	178	71	86	14.13	6	67	83	33	3
Chipola	58	28	89	11.27	4	50	100	25	3
Edison	221	267	88	12.75	5	60	100	40	4
Florida Keys	104	7	57	16.20	5	100	80	40	2
Gulf Coast	145	88	91	12.26	6	50	83	33	4
Lake City	245	111	78	11.48	12	58	92	33	3
Lake Sumter	70	16	63	17.65	6	83	67	50	2
Manatee	20	18	61	19.45	6	67	67	50	2
North Florida	18	10	100	13.38	1	0	100	0	4
Pensacola	174	97	93	12.77	6	50	83	33	4
Polk	119	25	96	15.05	5	60	80	20	3
Santa Fe	127	162	80	12.11	8	25	88	50	3
South Florida	58	35	91	13.23	6	67	100	50	3
Saint Johns River	178	14	71	20.44	7	86	71	29	1

Note: Cost per completion cannot be calculated for College Credit Certificate programs because the data are not separately reported by the Department of Education.

[a] Percent of completers with any reported wages during the year following program completion.

[b] Average wage for completers earning the equivalent of at lease full-time minimum wage (i.e., $2,678 in a quarter).

[c] Benchmarks as follows: <= median cost/completion, >=% finding employment, >= average wage, <= % less than 5 completers, >= % TOL, >= % HS/HW