

Secondary Work-Based Learning: 2009-10 Enrollment and Performance Report



Florida Department of Education
Division of Career and Adult Education
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At a Glance

In 2009-10, students in a large majority of Florida's school districts took work-based learning courses. This study found the following regarding student enrollment and performance:

- There were 8,914 students enrolled in at least one high school Diversified Career Technology (DCT) course and 10,401 students enrolled in at least one On-the-Job Training (OJT) course.
- Students enrolled in high school work-based learning courses had similar enrollments to other high school Career and Technical Education (CTE) courses when disaggregated by race/ethnicity, gender, and free/reduced lunch eligibility.
- Students enrolled in high school work-based learning courses were absent more frequently than students in other CTE courses.
- Standard diploma rates of high school students taking work-based learning courses were similar to those taking other CTE courses.
- Students enrolled in high school work-based learning courses were more likely to drop out of high school than students enrolled in other CTE courses.
- Grade point average and FCAT scores were lower for students enrolled in work-based learning courses than those taking other CTE courses.
- There were 6,613 students enrolled in at least one middle school level DCT course, of which 1,946 students were ninth graders.
- Students enrolled in middle school level DCT courses had similar enrollment results to their counterparts in high school when disaggregated by race/ethnicity and gender but had more students eligible for free/reduced lunch, especially among the ninth graders.

Introduction

This report focuses on describing the population of students taking work-based learning courses, disaggregating data by such factors as race/ethnicity, gender, free/reduced lunch status, and attendance/discipline issues. It also focuses on the performance of these students and examines students' graduation and retention rates, grade point averages, and FCAT scores.

Work-Based Learning

Work-based learning includes a combination of supervised student-centered instruction and work-based job experience. Students in these work-based learning programs must be paid for their on-the-job work experience. For the purposes of this report, work-based learning will encompass secondary DCT and OJT programs and courses.¹ In Florida, DCT includes three middle school courses that are each classified as a program and four high school courses that make up one program. Middle school courses focus on giving students initial exposure to the skills associated with occupations in a diverse range of careers, while high school courses encompass these skills plus an on-the-job component. There are also eight OJT programs in the state corresponding with content-based career areas, although only six programs had students enrolled in Florida in 2009-10. Students are assigned high school credits for classroom

¹ Due to a low number of reported participants throughout the state, pre-apprenticeship programs were excluded.

instruction and on-the-job training. Credit ranges from one credit for classroom instruction to multiple credits for on-the-job training. DCT and OJT courses are included in Appendix A.

Diversified Career Technology

The DCT program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for a broad array of education and career opportunities; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, work attitudes, general employability skills, technical skills, and occupation-specific skills. This program offers a broad foundation of knowledge and skills to prepare students for employment, allowing small rural districts the opportunity to offer a variety of different skill areas otherwise unattainable due to funding and staffing. This program is a planned sequence of instruction consisting of three Occupational Completion Points.²

The purpose of this program is to provide students with “student-centered” (as opposed to “teacher-centered”) selected occupational skills through employment related instruction and paid, on-the-job training supervised by an employer and a teacher/coordinator. This method of delivery enables students to develop a variety of workplace competencies and transferable skills as well as develop students who will be motivated, self-disciplined individuals; caring, responsible, life-long learners; flexible and committed to technical competence; and skillful at social interactions, leadership, and problem-solving.

The classroom instruction courses develop competencies in health, safety, and environmental issues; professional, legal, and ethical issues; finance; leadership; communication; labor and human resources; economics; entrepreneurship; career planning; technology; management; and technical and production skills.

Through the supervised on-the-job training course, students are provided opportunities for planned instructional activities and student evaluations in a specified job setting. A student may not enroll in the on-the-job training course without previous completion of or concurrent enrollment in either DCT Principles or DCT Applications. DCT Principles does not require enrollment in a concurrent OJT course. However, at least one credit in OJT must be completed to enable the student to reach the first OCP. The student must be paid for work performed.

On-The-Job Training

OJT courses provide coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in their chosen career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of their chosen career cluster.

² “Occupational completion point” means the occupational competencies that qualify a person to enter an occupation that is linked to a career and technical program.

Each student job placement must be related to the job preparatory program in which the student is enrolled or has completed.

These courses provide the on-the-job training component when the cooperative method of instruction is appropriate. Whenever the cooperative method is offered, the following is required for each student: a training agreement; a training plan signed by the student, teacher and employer, including instructional objectives; a list of on-the-job and in-school learning experiences; a workstation which reflects equipment, skills and tasks which are relevant to the occupation which the student has chosen as a career goal; and a site supervisor with a working knowledge of the selected occupation. The workstation may be in an industry setting or in a virtual learning environment. The student must be compensated for work performed.

The teacher/coordinator must meet with the site supervisor a minimum of once during each grading period for the purpose of evaluating the student's progress in attaining the competencies listed in the training plan.

An OJT course may be taken by a student for one or more semesters. A student may earn multiple credits in this course.

Enrollments in the following OJT programs were included in this report:

- Agriculture Cooperative Education – OJT
- Industrial Cooperative Education – OJT
- Business Cooperative Education – OJT
- Public Service Cooperative Education – OJT
- Marketing Cooperative Education – OJT
- Cooperative Diversified Education – OJT

Methodology

Comparison Group

The comparison group for this study is all students enrolled in any high school CTE program in 2009-10 who did not take any DCT or OJT courses that year. As DCT and OJT courses encompass a wide variety of programs in many different career clusters, the comparison group is appropriate in relation to the general curricular choices of the students, but it is not refined to control for student, school, and teacher characteristics. Interpretations of differences should be made with caution.

Findings

Demographics for Students Enrolled in High School Work-Based Learning Courses

In academic year 2009-10, there were 8,914 students enrolled in at least one high school DCT course, 10,401 students enrolled in at least one OJT course, and 332,351 students in the comparison group. Sixty-one of Florida's 67 school districts had at least one student enrolled in a DCT or OJT course at the high school level. The five districts with the most students enrolled in at least one DCT course were Miami-Dade (1,819), Palm Beach (1,216), Pasco (565), Lake (454), and Lee (412). Miami-Dade also ranked as the district with the most students enrolled in at least one OJT course (2,210) followed by Hillsborough (1,661), Orange (827), Broward (430), and Pinellas (398). Statewide, DCT students were enrolled in 1.68 DCT courses on average for the 2009-10 academic year while OJT students took an average of 1.08 OJT courses. A full list of enrollment in high school work-based learning courses by district is included in Appendix B.

Tables 1 through 3 show the number of students and overall percentage of students enrolled in DCT and OJT courses in addition to all other CTE courses, by race/ethnicity, gender, and eligibility for free/reduced lunch. All three subgroups were fairly similar among the DCT and OJT students and the comparison group of students.

Table 1
Race/Ethnicity by Course Type, 2009-10

| Race/Ethnicity | DCT | | OJT | | Comparison Group | |
|------------------------------------|--------------|--------------|---------------|--------------|------------------|--------------|
| | N | % | N | % | N | % |
| Asian or Pacific Islander | 99 | 1.1 | 113 | 1.1 | 7,031 | 2.1 |
| African-American | 1,915 | 21.5 | 1,750 | 16.8 | 76,229 | 22.9 |
| Hispanic | 1,952 | 21.9 | 2,553 | 24.6 | 77,851 | 23.4 |
| American Indian/ Alaskan Native | 32 | 0.4 | 31 | 0.3 | 1,099 | 0.3 |
| Multi-Racial | 150 | 1.7 | 161 | 1.5 | 9,099 | 2.7 |
| White | 4,766 | 53.5 | 5,793 | 55.7 | 161,042 | 48.5 |
| Total | 8,914 | 100.0 | 10,401 | 100.0 | 332,351 | 100.0 |

Source: Analysis of EDW data

Table 2
Gender by Course Type, 2009-10

| Gender | DCT | | OJT | | Comparison Group | |
|--------------|--------------|--------------|---------------|--------------|------------------|--------------|
| | N | % | N | % | N | % |
| Male | 4,332 | 48.6 | 4,881 | 46.9 | 162,494 | 48.9 |
| Female | 4,582 | 51.4 | 5,520 | 53.1 | 169,857 | 51.1 |
| Total | 8,914 | 100.0 | 10,401 | 100.0 | 332,351 | 100.0 |

Source: Analysis of EDW data

Table 3
Lunch Status by Course Type, 2009-10

| Free/Reduced Lunch Status | DCT | | OJT | | Comparison Group | |
|---------------------------|--------------|--------------|---------------|--------------|------------------|--------------|
| | N | % | N | % | N | % |
| Full Price | 5,551 | 62.3 | 7,051 | 67.8 | 200,420 | 60.3 |
| Free/Reduced | 3,363 | 37.7 | 3,350 | 32.2 | 131,931 | 39.7 |
| Total | 8,914 | 100.0 | 10,401 | 100.0 | 332,351 | 100.0 |

Source: Analysis of EDW data

Behavioral Characteristics of Students Enrolled in High School Work-Based Learning Courses

Student engagement can be measured through rates of absenteeism and disciplinary actions. Table 4 shows that DCT and OJT students were more likely to be absent than comparison group students. DCT and OJT students were absent an average of 17 to 18 days per year compared with comparison group students' absentee rate of 12 days per year. Absenteeism was much higher among DCT and OJT students in the lower grade levels and diminished as grade level increased (see Table 5). Comparison group students had an opposite trend and saw their absentee rate climb slightly as grade level increased.

Table 4
Attendance by Course Type, 2009-10

| Attendance | DCT | | OJT | | Comparison Group | |
|--------------|-------|--------|--------|--------|------------------|--------|
| | N | Mean | N | Mean | N | Mean |
| Days Present | 8,904 | 146.43 | 10,344 | 148.66 | 331,731 | 154.65 |
| Days Absent | 8,904 | 17.35 | 10,344 | 17.94 | 331,731 | 11.93 |

Source: Analysis of EDW data

Table 5
Attendance by Grade Level and Course Type, 2009-10

| Attendance | DCT | | OJT | | Comparison Group | |
|--------------|-------|--------|-------|--------|------------------|--------|
| | N | Mean | N | Mean | N | Mean |
| Grade 9 | | | | | | |
| Days Present | 179 | 108.66 | 76 | 113.47 | 89,681 | 156.44 |
| Days Absent | 179 | 25.58 | 76 | 31.21 | 89,681 | 10.82 |
| Grade 10 | | | | | | |
| Days Present | 381 | 121.49 | 346 | 122.86 | 82,612 | 154.70 |
| Days Absent | 381 | 26.17 | 346 | 26.40 | 82,612 | 11.31 |
| Grade 11 | | | | | | |
| Days Present | 1,400 | 135.22 | 1,356 | 145.65 | 80,897 | 153.43 |
| Days Absent | 1,400 | 18.78 | 1,356 | 19.05 | 80,897 | 12.46 |
| Grade 12 | | | | | | |
| Days Present | 6,944 | 151.04 | 8,566 | 150.49 | 78,541 | 153.83 |
| Days Absent | 6,944 | 16.37 | 8,566 | 17.31 | 78,541 | 13.32 |

Source: Analysis of EDW data

Table 6 shows that disciplinary actions were similar among DCT, OJT, and comparison group students. Throughout 2009-10, DCT and OJT students had an average of 0.57 and 0.50 disciplinary actions, respectively, while comparison group students had an average 0.63 disciplinary actions.

Table 6
Disciplinary Actions by Course Type, 2009-10

| | DCT | | OJT | | Comparison Group | |
|----------------------|-------|------|--------|------|------------------|------|
| | N | Mean | N | Mean | N | Mean |
| Disciplinary Actions | 8,914 | 0.57 | 10,401 | 0.50 | 332,351 | 0.63 |

Source: Analysis of EDW data

Performance of Students Enrolled in High School Work-Based Learning Courses

Academic Performance

Table 7 shows that DCT students in 2009-10 had an average cumulative GPA of 2.52 compared with 2.63 among OJT students. Comparison group students had an average cumulative GPA of 2.55. When average GPA is disaggregated by grade level, GPA increases dramatically for DCT and OJT students. By twelfth grade, DCT and OJT students' GPA is comparable to comparison group students (see Table 8).

Table 7
Grade Point Average by Course Type, 2009-10

| | DCT | | OJT | | Comparison Group | |
|-----|-------|------|--------|------|------------------|------|
| | N | Mean | N | Mean | N | Mean |
| GPA | 8,912 | 2.52 | 10,390 | 2.63 | 332,243 | 2.55 |

Source: Analysis of EDW data

Table 8
Grade Point Average by Grade Level and Course Type, 2009-10

| GPA | DCT | | OJT | | Comparison Group | |
|----------|-------|------|-------|------|------------------|------|
| | N | Mean | N | Mean | N | Mean |
| Grade 9 | 179 | 1.77 | 80 | 1.82 | 89,808 | 2.38 |
| Grade 10 | 383 | 1.79 | 356 | 1.87 | 82,745 | 2.52 |
| Grade 11 | 1,401 | 2.29 | 1,367 | 2.44 | 81,030 | 2.59 |
| Grade 12 | 6,949 | 2.62 | 8,587 | 2.69 | 78,660 | 2.72 |

Source: Analysis of EDW data

Comparison group students achieved a much higher passing rate (score of Level 3 or above) than their DCT and OJT counterparts on both the reading and math assessments at ninth and tenth grade (see Table 9). The disparities were extremely evident in tenth grade as comparison group students achieved a 29.6 percent passing rate on the reading assessment compared with 4.8 percent and 6.9 percent for DCT and OJT students, respectively. The math assessment yielded similar results with a 67.4 percent passing rate for comparison group students compared with 26.8 percent for DCT students and 25.1 percent for OJT students.

Table 9³
FCAT Passing Rate by Course Type, 2009-10

| FCAT Passing Rate | DCT | | OJT | | Comparison Group | |
|-------------------|-----|------|-----|------|------------------|------|
| | N | % | N | % | N | % |
| Grade 9 | | | | | | |
| Reading | 40 | 30.1 | 15 | 33.3 | 41,074 | 49.7 |
| Math | 63 | 45.7 | 25 | 56.8 | 57,349 | 69.6 |
| Grade 10 | | | | | | |
| Reading | 71 | 4.8 | 104 | 6.9 | 30,351 | 29.6 |
| Math | 166 | 26.8 | 149 | 25.1 | 56,961 | 67.4 |

Source: Analysis of EDW data

³ FCAT passing rate is defined as students achieving a Level 3 or above on each assessment.

CTE Concentration Rate

CTE concentration rate (defined as those students who have taken three or more credits in a single CTE program) did not vary greatly among DCT, OJT, and comparison group students. Table 10 shows that students taking at least one DCT course had a concentration rate of 15.3 percent in any CTE program. Among the DCT course-takers who had reached the CTE concentration threshold, almost all (1,321 out of 1,367 students, or 96.6%) concentrated in the DCT program. Students taking at least one OJT course had a higher concentration rate of 27.2 percent in any CTE program. Comparison group students had a similar rate to DCT students with 16.5 percent of students considered a CTE concentrator.

Table 10
CTE Concentrator Status by Course Type, 2009-10

| CTE Concentrator | DCT | | OJT | | Comparison Group | |
|------------------|--------------|--------------|---------------|--------------|------------------|--------------|
| | N | % | N | % | N | % |
| Yes | 1,367 | 15.3 | 2,827 | 27.2 | 54,943 | 16.5 |
| No | 7,547 | 84.7 | 7,574 | 72.8 | 277,408 | 83.5 |
| Total | 8,914 | 100.0 | 10,401 | 100.0 | 332,351 | 100.0 |

Source: Analysis of EDW data

Graduation and Dropout Rates

Twelfth grade students achieving a standard diploma did not vary much among the DCT, OJT, and comparison group students (see Table 11). All three groups showed a standard diploma rate between 72.6 percent and 77.8 percent.

Table 11⁴
Standard Diploma Rate by Course Type, 2009-10

| 12th Grade Standard Diploma | DCT | | OJT | | Comparison Group | |
|-----------------------------|--------------|--------------|--------------|--------------|------------------|--------------|
| | N | % | N | % | N | % |
| Yes | 5,101 | 73.4 | 6,690 | 77.8 | 57,129 | 72.6 |
| No | 1,850 | 26.6 | 1,905 | 22.2 | 21,553 | 27.4 |
| Total | 6,951 | 100.0 | 8,595 | 100.0 | 78,682 | 100.0 |

Source: Analysis of EDW data

Table 12 shows that DCT and OJT students were more likely to drop out of high school than comparison group students. DCT and OJT students had a dropout rate of 3.2 percent compared with comparison group students' dropout rate of 1.5 percent. Dropout rate did decline markedly among DCT and OJT students as grade level increased. Dropout rates for DCT and OJT students were much higher in ninth and tenth grades when compared with the comparison group.

⁴ Standard diploma rate is defined as students with a withdrawal code of W06, W6A, or W6B.

By twelfth grade, dropout rate for DCT and OJT students was comparable to the comparison group (see Table 13).

Table 12⁵
Dropout Rate by Course Type, 2009-10

| Dropped Out | DCT | | OJT | | Comparison Group | |
|--------------|--------------|--------------|---------------|--------------|------------------|--------------|
| | N | % | N | % | N | % |
| Yes | 288 | 3.2 | 337 | 3.2 | 4,919 | 1.5 |
| No | 8,626 | 96.8 | 10,064 | 96.8 | 327,432 | 98.5 |
| Total | 8,914 | 100.0 | 10,401 | 100.0 | 332,351 | 100.0 |

Source: Analysis of EDW data

Table 13
Dropout Rate by Grade Level and Course Type, 2009-10

| Dropped Out | DCT | | OJT | | Comparison Group | |
|-------------|-------|------|-------|------|------------------|------|
| | N | % | N | % | N | % |
| Grade 9 | | | | | | |
| Yes | 16 | 8.9 | 8 | 9.9 | 936 | 1.0 |
| No | 163 | 91.1 | 73 | 90.1 | 88,913 | 99.0 |
| Grade 10 | | | | | | |
| Yes | 19 | 5.0 | 34 | 9.6 | 1,086 | 1.3 |
| No | 364 | 95.0 | 322 | 90.4 | 81,681 | 98.7 |
| Grade 11 | | | | | | |
| Yes | 60 | 4.3 | 57 | 4.2 | 1,285 | 1.6 |
| No | 1,341 | 95.7 | 1,312 | 95.8 | 79,768 | 98.4 |
| Grade 12 | | | | | | |
| Yes | 193 | 2.8 | 238 | 2.8 | 1,612 | 2.0 |
| No | 6,758 | 97.2 | 8,357 | 97.2 | 77,070 | 98.0 |

Source: Analysis of EDW data

Given the comparatively low average GPA and FCAT achievement level combined with a high dropout rate among ninth grade DCT and OJT students, the data suggest that districts may have enrolled students in work-based learning courses as a dropout prevention measure. This interpretation should be made with caution due to the small number of students enrolled in these courses in ninth and tenth grades.

⁵ Dropout rate is defined as students with a withdrawal code of DNE, W05, W13, W15, W18, W21, W22, or W23.

Demographics for Students Enrolled in Middle School Work-Based Learning Courses

In academic year 2009-10, there were 6,613 students enrolled in at least one middle school level DCT course. Per the curriculum frameworks, these courses are eligible to be taught in grades 6 through 9. Nineteen of Florida's 67 school districts had at least one student enrolled in a DCT course at the middle school level. The five districts with the most students enrolled in grades 6 through 9 in at least one DCT course were Lee (1,858), St. Lucie (1,062), Palm Beach (861), Marion (840), and Miami-Dade (475).

Table 14 shows that eighth grade accounted for 41.9 percent of students while sixth and seventh grade accounted for 28.6 percent of students. Ninth graders taking middle school courses accounted for 29.4 percent of enrollment. Ninety percent of the ninth-grade enrollment in the middle school program statewide was concentrated in two districts: St. Lucie (1,062 students) and Lee (707 students). All of St. Lucie's high school enrollment in DCT was in the middle school program. A full list of enrollment in middle school courses by district is included in Appendix C.

Table 14
Grade Level, 2009-10

| Grade Level | N | % |
|--------------|--------------|--------------|
| Grade 6 | 823 | 12.4 |
| Grade 7 | 1,071 | 16.2 |
| Grade 8 | 2,773 | 41.9 |
| Grade 9 | 1,946 | 29.4 |
| Total | 6,613 | 100.0 |

Source: Analysis of EDW data

Tables 15 through 17 show the number of students and overall percentage of students enrolled in DCT middle school courses, by race/ethnicity, gender, and eligibility for free/reduced lunch. Both race/ethnicity and gender distributions were fairly consistent with the DCT students enrolled in high courses (Tables 1 and 2); however, the proportion of DCT students in middle school courses eligible for free/reduced lunch was much higher than their counterparts in high school courses (Table 3). Ninth graders enrolled in DCT middle school courses had 60.8 percent of students eligible for free/reduced lunch compared with 52.0 percent of ninth graders enrolled in DCT high school courses.

Table 15
Race/Ethnicity, 2009-10

| Race/Ethnicity | N | % |
|---------------------------------|--------------|--------------|
| Asian or Pacific Islander | 134 | 2.0 |
| African-American | 1,410 | 21.3 |
| Hispanic | 1,572 | 23.8 |
| American Indian/ Alaskan Native | 44 | 0.7 |
| Multi-Racial | 235 | 3.6 |
| White | 3,218 | 48.7 |
| Total | 6,613 | 100.0 |

Source: Analysis of EDW data

Table 16
Gender, 2009-10

| Gender | N | % |
|--------------|--------------|--------------|
| Male | 3,453 | 52.2 |
| Female | 3,160 | 47.8 |
| Total | 6,613 | 100.0 |

Source: Analysis of EDW data

Table 17
Lunch Status, 2009-10

| Free/Reduced Lunch Status | N | % |
|---------------------------|--------------|--------------|
| Full Price | 2,954 | 44.7 |
| Free/Reduced | 3,659 | 55.3 |
| Total | 6,613 | 100.0 |

Source: Analysis of EDW data

Performance of Students Enrolled in Middle School Work-Based Learning Courses

A higher percentage of middle school DCT students were on grade level (FCAT score of Level 3 or above) than the state average on the reading and math assessments in sixth through eighth grade and the science assessment in eighth grade.⁶ Table 18 shows that sixth through eighth graders averaged 8 to 13 percentage points higher on all three assessments than the state as a whole. Ninth graders, however, averaged 11 and 13 percentage points lower on the reading and

⁶ The state average includes middle school DCT students, so this is not a comparison between two distinct groups. However, the state population is so much larger than the DCT population that removing the DCT student scores from the statewide scores would result at most in a very small percentage change.

math assessments, respectively, further strengthening the evidence that ninth grade enrollment in DCT is associated with struggling students.

Table 18
FCAT Passing Rate, 2009-10

| FCAT Achievement Level 3 or Above | DCT | | State | |
|--------------------------------------|-------|------|---------|----|
| | N | % | N | % |
| Grade 6 | | | | |
| Reading | 641 | 78.6 | 194,407 | 67 |
| Math | 553 | 67.8 | 194,399 | 57 |
| Grade 7 | | | | |
| Reading | 785 | 75.3 | 197,178 | 68 |
| Math | 712 | 68.4 | 197,130 | 61 |
| Grade 8 | | | | |
| Reading | 1,795 | 65.6 | 193,010 | 55 |
| Math | 2,113 | 77.3 | 192,919 | 68 |
| Science | 1,418 | 52.2 | 192,138 | 43 |
| Grade 9 | | | | |
| Reading | 656 | 35.8 | 200,395 | 48 |
| Math | 1,014 | 55.4 | 200,111 | 67 |

Source: Analysis of EDW data and Florida Department of Education Web site

Conclusion

Work-based learning students on average had lower GPAs and FCAT scores, higher dropout rates, and higher rates of absenteeism than other CTE students used to make up the comparison group. As a whole, demographics were similar for DCT, OJT, and comparison group students. By twelfth grade, DCT and OJT students' performance and behavioral characteristics began to mimic the performance and behavioral characteristics of students in the comparison group.

The differences between work-based learning students and comparison group students might be explained by a number of student and environmental characteristics. This study does not attempt to isolate the causes of the disparities; however, performance increases as the work-based learning students progress through the upper grades suggest that some students may initially be placed in work-based learning courses as a dropout prevention method. Through attrition and dedicated investment in the work-based learning programs in eleventh and twelfth grades, student performance at these grade levels is comparable to students in other CTE programs.

Appendix A
Secondary DCT and OJT Courses

| Course Name | Course Number | Number of Credits |
|---|---------------|-------------------|
| Middle School DCT Courses (Programs) | | |
| Exploration of Career and Technical Occupations | 9100110 | .5 |
| Orientation to Career and Technical Occupations | 9100210 | .5 |
| Orientation to Career and Technical Occupations and Career Planning | 9100310 | .5 |
| High School DCT Courses | | |
| Diversified Career Technology Principles | 8303010 | 1 |
| Diversified Career Technology – OJT | 8300410 | Multiple |
| Diversified Career Technology Applications | 8303020 | 1 |
| Diversified Career Technology Management | 8303030 | 1 |
| OJT Courses | | |
| Agriculture Cooperative Education – OJT | 8100410 | Multiple |
| Business Cooperative Education – OJT | 8200410 | Multiple |
| Cooperative Diversified Education – OJT | 8300420 | Multiple |
| Family and Cooperative Education – OJT | 8500410 | Multiple |
| Health Science Cooperative Education – OJT | 8400410 | Multiple |
| Industrial Cooperative Education – OJT | 8700400 | Multiple |
| Marketing Cooperative Education – OJT | 8800410 | Multiple |
| Public Service Cooperative Education – OJT | 8900410 | Multiple |

Source: Curriculum Frameworks, Division of Career and Adult Education

Appendix B
Enrollment for High School Work-Based Learning Courses by District, 2009-10

| District | DCT Enrollment | OJT Enrollment | Total Enrollment |
|--------------|----------------|----------------|------------------|
| Alachua | 23 | 78 | 101 |
| Baker | 56 | 37 | 93 |
| Bay | 89 | 214 | 303 |
| Bradford | 24 | 0 | 24 |
| Brevard | 60 | 263 | 323 |
| Broward | 377 | 430 | 807 |
| Calhoun | 3 | 0 | 3 |
| Charlotte | 187 | 74 | 261 |
| Citrus | 0 | 182 | 182 |
| Clay | 21 | 56 | 77 |
| Collier | 0 | 65 | 65 |
| Columbia | 24 | 25 | 49 |
| Dade | 1,819 | 2,210 | 4,029 |
| Desoto | 0 | 26 | 26 |
| Duval | 236 | 93 | 329 |
| Escambia | 155 | 104 | 259 |
| Flagler | 239 | 1 | 240 |
| Franklin | 16 | 0 | 16 |
| Gilchrist | 0 | 20 | 20 |
| Glades | 0 | 3 | 3 |
| Hamilton | 0 | 15 | 15 |
| Hardee | 23 | 170 | 193 |
| Highlands | 0 | 187 | 187 |
| Hillsborough | 218 | 1,661 | 1,879 |
| Holmes | 17 | 12 | 29 |
| Jackson | 60 | 34 | 94 |
| Jefferson | 0 | 10 | 10 |
| Lafayette | 0 | 40 | 40 |
| Lake | 454 | 152 | 606 |
| Lee | 412 | 369 | 781 |
| Leon | 277 | 39 | 316 |
| Levy | 0 | 116 | 116 |
| Liberty | 14 | 2 | 16 |
| Madison | 18 | 6 | 24 |
| Manatee | 174 | 72 | 246 |
| Marion | 160 | 363 | 523 |
| Martin | 0 | 26 | 26 |
| Monroe | 84 | 26 | 110 |

| District | DCT Enrollment | OJT Enrollment | Total Enrollment |
|---------------------------------|----------------|----------------|------------------|
| Nassau | 222 | 0 | 222 |
| Okaloosa | 190 | 57 | 247 |
| Okeechobee | 0 | 12 | 12 |
| Orange | 49 | 827 | 876 |
| Osceola | 1 | 64 | 65 |
| Palm Beach | 1,216 | 389 | 1,605 |
| Pasco | 565 | 172 | 737 |
| Pinellas | 252 | 398 | 650 |
| Polk | 90 | 396 | 486 |
| Putnam | 91 | 14 | 105 |
| Santa Rosa | 189 | 17 | 206 |
| Sarasota | 1 | 94 | 95 |
| Seminole | 145 | 247 | 392 |
| St. Johns | 0 | 35 | 35 |
| St. Lucie | 0 | 39 | 39 |
| Sumter | 0 | 139 | 139 |
| Suwannee | 78 | 0 | 78 |
| Taylor | 69 | 0 | 69 |
| Union | 16 | 16 | 32 |
| Volusia | 377 | 187 | 564 |
| Wakulla | 0 | 31 | 31 |
| Walton | 123 | 51 | 174 |
| Florida State University School | 0 | 35 | 35 |
| Total | 8,914 | 10,401 | 19,315 |

Source: Analysis of EDW data

Appendix C
Enrollment for Middle School Courses by District, 2009-10

| District | DCT Enrollment |
|--------------|----------------|
| Alachua | 39 |
| Charlotte | 109 |
| Collier | 63 |
| Columbia | 56 |
| Dade | 475 |
| Escambia | 161 |
| Hernando | 72 |
| Hillsborough | 186 |
| Holmes | 26 |
| Jackson | 17 |
| Lee | 1,858 |
| Marion | 840 |
| Okaloosa | 2 |
| Osceola | 216 |
| Palm Beach | 861 |
| Putnam | 208 |
| Seminole | 282 |
| St. Lucie | 1,062 |
| Sumter | 80 |
| Total | 6,613 |

Source: Analysis of EDW data