

# FLORIDA DEPARTMENT OF EDUCATION



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September 14, 2006

## MEMORANDUM

**TO:** Student Data Base Contacts  
**FROM:** Lavan Dukes *Lavan Dukes*  
**SUBJECT:** Class Size Processing

Three weekends have been set aside to allow your district to submit test data for the 2006-07 school year. These weekends will allow your district to submit the data for class size calculation runs prior to the October Survey 2 submissions. Only class size calculations will be available. **We will not be testing for the experience or other factors during the three test runs.** The specific times for these runs are:

Files Received by 4:00 PM ,  
EST,

September 15  
September 22  
September 29

Files Processed

September 16 and 17  
September 22 and 23  
September 30 and October 1

Reports Available


September 18  
September 25  
October 2

I have also attached the Class Size TA Paper. If you have questions regarding this, please contact me either by email at [lavan.dukes@fldoe.org](mailto:lavan.dukes@fldoe.org) or phone at 850/244-9917.

GARNET L. DUKES, JR.

*Bureau Chief*

*Accountability, Research, and Measurement*

<p><b>No: FY2006-01</b></p> <p><b><u>UPDATED</u></b> <b><u>July 2006</u></b></p> <p><b>Bureau of Education Information and Accountability Services</b></p>	 <p><b>Florida Department of Education</b></p>	<p><b><u>Contact Information</u></b></p> <p><b>Lavan Dukas (850) 245-0400 SC 205-0400</b></p>
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**TECHNICAL ASSISTANCE PAPER**

**Class Size Reduction Data Collection**

**Purpose**

The purposes of this Technical Assistance Paper are the following:

- 1) Provide brief history of the progress toward achieving class size caps
- 2) To describe the changes made during the previous Legislation session
- 3) To explain the steps taken in calculating class averages.
- 4) To explain how to accurately report class size.
- 5) To help districts improve the quality of class size data.

**Background**

In November, 2002, Florida voters passed Constitutional Amendment 9 requiring the state Legislature to provide funding to reduce the maximum class size in Florida's public schools. The goals set by the amendment to be reached by 2010 are 18 students per prekindergarten class through grade 3, 22 students per class in grades 4 through 8, and 25 students per class in grades 9 through 12. The amendment specified a two student per year reduction from district averages to school averages and finally to individual classes to begin with the 2003-2004 school year until class size goals are reached. Shown below in Table 1 are the district averages for the Grade Groupings covered by the Constitutional Amendment.

**Table 1. Class Size Compliance by Grade Group, Calculated at the District Level for 2002-2003 through 2005-2006\***

<u>Grade Group</u>	<u>2002-2003</u>	<u>2003-2004</u>	<u>2004-2005</u>	<u>2005-2006</u>
PK-3	23.07	20.54	18.98	18.16
4-8	24.16	22.43	21.30	20.48
9-12	24.10	24.06	23.65	22.96

Although the calculations show a steady move toward compliance in all of the grade groups, the requirements imposed at the school level are not as close to compliance. As shown in Table 2, Schools and classrooms are not as close in compliance.

**Table 2, Percent of Schools and Classrooms Achieving Compliance Based Upon 2005-2006 School Year Requirements\***

<u>Grade Group</u>	<u>Percent of Schools</u>	<u>Percent of Classrooms</u>
PK-3	41.88	54.26
4-8	24.29	43.12
9-12	14.85	42.51

The Class Size Reduction data collection is designed to provide benchmark class size data, track

\* Based upon statutory requirements prior to the 2006 Legislative Session

changes over time, and be used for measuring progress toward the Constitutional requirements.

### **Changes in Class Size Calculation Requirements Passed by the 2006 Florida Legislature**

The 2006 Session of the Florida Legislature made substantive changes in the requirements related to the implementation of the Class Size Constitutional Amendment. Specifically, the amendment was made to S. 1003.(4) and (5) and directed the following:

- 1) That for fiscal years 2006-2007 through 2009-2010 and thereafter, each teacher assigned to any classroom was to be included in the average class size calculation for compliance.
- 2) That any school district could use teaching strategies that include the assignment of more than one teacher to a classroom of students and that were implemented before July 1, 2005.
- 3) That effective July 1, 2005, school districts could implement additional teaching strategies that include the assignment of more than one teacher to a classroom of students only for the following purposes:
  - a. Pairing teachers for the purpose of staff development.
  - b. Pairing new teachers with veteran teachers.
  - c. Reducing turnover among new teachers.
  - d. Pairing teachers who are teaching out-of-field with teachers who are in-field.
  - e. Providing for more flexibility and innovation in the classroom.
  - f. Improving learning opportunities for students, including students who have disabilities.

The Legislature further directed that any teaching strategies implemented on or after July 1, 2005, for the above purposes could be implemented subject to the following restrictions:

- 1) That reasonable limits are placed on the number of students in a classroom so that classrooms are not overcrowded;
- 2) That teacher-to-student ratios within a curriculum area not exceed constitutional limits;
- 3) That teacher to student ratios in a specific grade level not exceed constitutional limits;
- 4) That at least one member of the team must have at least 3 years of teaching experience;
- 5) That at least one member of the team must be teaching in field; and
- 6) That the teachers must be trained in team-teaching methods within 1 year after assignment.

The additional changes identified legislatively directed that the use of strategies implemented meet the letter and intent of the Florida Constitution and the Florida Statutes which relate to implementing class-size reduction and that the provisions referenced above are retroactive as appropriate. With this change the Legislature directed that no longer would financial penalties apply as a result of the use of any legal strategy, including, but not limited to, those shown above.

### **What data are used to determine class size?**

As originally developed, the reporting formats of the Department of Education's Staff and Student Data Base were designed to collect funding, program management, and compliance information from school districts. With the implementation of the Class Size Amendment to the Florida Constitution, changes were made to the reporting formats necessary to be used in calculating class size. Those changes were originally made to the Student Course Schedule Format and Teacher Course Format. With the changes made by the 2006 Florida Legislature, additional changes to existing formats, the use of additional elements, from existing formats, and the use of additional formats has been made necessary. The Teacher Course Format has a new element added and the Staff Experience Format has been added as part of the calculation algorithm.

The data used in the Class Average Algorithm are derived from the Student Course Schedule Format, the Teacher Course Format, and the Teacher Experience Format as submitted to the Department of Education Staff and Student Information Data Bases during October (Survey 2) and February (Survey 3). The data elements extracted from these formats include the following:

**Student Course Schedule Format**

District Number, Current Enrollment  
School Number, Current Enrollment  
District Number, Current Instruction/Service  
School Number, Current Instruction/Service  
Student Number Identifier, Florida  
Course Number  
Section Number  
Period Number  
Grade Level  
Term  
Day of Week Scheduled, Monday  
Day of Week Scheduled, Tuesday  
Day of Week Scheduled, Wednesday  
Day of Week Scheduled, Thursday  
Day of Week Scheduled, Friday  
Day of Week Scheduled, Saturday  
Day of Week Scheduled, Date Certain

**Teacher Course Format**

District Number, Current Enrollment  
School Number, Current Enrollment  
District Number, Current Instruction/Service  
School Number, Current Instruction/Service  
Social Security Number (Teacher)  
Term  
Term/Survey Indicator  
Course Number  
Section Number  
Period Number  
Facility Type  
Classroom Identification (FISH) Number  
Scheduling Method  
**Certification/Licensure/Qualification Status (New element used)**  
**Team Teacher Training (New element)**

**Staff Experience Format (New format used)**

District Number  
Social Security Number  
Fiscal Year  
Experience Type  
Experience Length

Other tables that are employed in determining class averages include:

- 1) The Master School Identification table (to distinguish Department of Juvenile Justice Facilities, Charter Schools, and the Florida Virtual School and its franchises) and
- 2) The Core Courses for Class Size Reduction (see Information Database Requirements/Appendix S).

**The Classroom is the Key**

The Class Average Algorithm is neither a student/teacher ratio, nor a count of the number of students in each of the wide range of courses taught in a district. The key to the Class Average Algorithm is the classroom, since a classroom may contain more than one teacher and multiple classes are frequently

taught in a term/classroom/period combination. Thus, it is the term/classroom/period combination that is used to determine the number of students in each classroom at any given time during the school day.

Most classrooms in a district are identified using the FISH (Florida Inventory of School Houses) number, a 21-digit combination of Facility, Facility Suffix, Parcel, Building, and Room identifiers. However, students are also taught in facilities that are not owned and/or operated by a district, so Classroom Identification Numbers built on the same pattern as a FISH number must be assigned to these facilities in order to render unique classrooms to be counted and considered for the Class Average Algorithm.

It is recommended that districts carefully review FISH data for accuracy. The on-line educational plant survey may be updated by district directors of facilities. Either Sandra Keen, (850) 245-9284, or Dr. Charles Wooten, (850) 245-9299, in the Office of Educational Facilities is available to provide technical assistance to districts in completing the automated educational plant survey update.

### **How the Class Average Algorithm Works for the Grade Groupings**

The Class Average Algorithm counts all the students in every term/classroom/period combination in which the MAIN course (that is, the course in which there are the most students) is a core course and divides that number by the total term/classroom/period “core” combinations reported. Following is a basic outline of the steps taken to determine the numerators (students in classrooms) and denominators (term/classroom/period combinations) that render the class averages for PK-3, 4-8, and 9-12 grade classrooms:

- 1) Count the number of students in each class (term/course/period) in each classroom.
- 2) Determine main grade and main course taught in each term/classroom/period based on the majority of students.
- 3) Identify term/classroom/period combinations in which the main course is a “core” course. Use only these combinations in the remaining steps.
  - Core courses include mathematics, language arts/reading, science, social studies, foreign language, English for Speakers of Other Languages, Exceptional Student Education, and courses taught in traditional self-contained elementary school classrooms.
- 4) For each grade range (PK-3, 4-8, 9-12) sum the number of students in the “core” combinations.
- 5) For each grade range (PK-3, 4-8, 9-12) count the number of “core” combinations.
- 6) Calculate the class averages.

For each grade range of a school (PK-3, 4-8, 9-12), divide the student count (from step 4) by the classroom count (from step 5).

A number of decision points are encountered in the averaging process of counting the number of students in each term/classroom/period combination:

- In the event that the same number of students is in core and non-core courses in the same term/classroom/period combination, the core course is determined to be the main course.
- In the event that the same number of students **in the main course** two or more grades is in the same term/classroom/period combination, the highest grade is determined to be the main grade.
- If students are in the same classroom/period combination in terms 1 and 3, 2 and 3, 1 and 6, 1 and 7, 2 and 8, and/or 2 and 9, the number of students is combined for those term combinations.
- The number of students in a classroom whose assigned teachers are coded Scheduling Method “C” (Co-Teacher) is divided by the number of teachers marked “C.”
- The number of students in the classroom who assigned teachers are coded Scheduling Method “I” (In Class One on One) is divided by the number of teachers in the classroom.
- The number of students in a classroom whose assigned teachers are coded Scheduling Method “M” (Multiple-Use Classroom or Pod) is divided by the number of teachers marked “M.”

- Depending on the main grade in the classroom, the multiple use instructional space will be determined by the following criteria: **Not used in the tradition average.**

<u>Grade Group</u>	<u>Net Square Footage</u>	<u>Design Code Not Equal To</u>
○ PK-3	> 1763	00001
○ 4-8	> 1715	00002
○ 9-12	> 1599	00003
- The number of students in a classroom whose assigned teachers are coded Scheduling Method "A" (Alternate Week) is divided by two.

The following exclusions are made in the process of building the class average tables:

- Facility Types 05 – 08 (correctional facilities) and 10 (home).
- School Number, Current Instruction begins with an alpha character (indicating postsecondary schools, colleges, or universities).
- McKay Reporting School Numbers
- Florida Virtual School Franchises (school number 7004)
- Course Number begins with an alpha character and Facility Type is 09 (Facility operated or owned by an agency or other provider other than the school district in which instructional services or classes are conducted).
- Duplicate students in the same term/classroom/period combination and their associated teachers. The duplicate students do get on the table but are excluded from calculations. All teachers are considered though.
- Period Number NN88 (where NN is numeric) indicating "pullout" classes.
- Days of the Week Scheduled not equal to Friday or "Date Certain."

### **Improving the Accuracy of Class Size Calculations**

It is essential that the district assure that every classroom is assigned a unique Classroom Identification Number, either a FISH number or a district-created Classroom ID number patterned on a FISH number. Districts may request a list of the most recent FISH numbers for their district through the CICS region at Northwest Regional Data Center/Student Component Menu/Reports for Request. Request the following reports:

F70393: Educational Facilities FISH file

F70630: Reported FISH under Scheduling C or M

The Department of Education also creates a number of reports subsequent to running the Class Average Algorithm that will allow a district to view its district averages and the detail for each grade grouping (PK-3, 4-8, 9-12). The reports include the following:

### **Reports Created Subsequent to Class Size Calculation**

- DPSxx.GQ.F70408.Yyyys - Class Average Report - By school/district/grade grouping (DPSxx.GQ.F70587.Yyyys in File Format)
- DPSxx.GQ.F70412.Yyyys - Class Size Report, Grades PK-3, Based on Class Average Table (DPSxx.GQ.F70424.Yyyys in File Format)
- DPSxx.GQ.F70413.Yyyys - Class Size Report, Grades 4-8, Based on Class Average Table (DPSxx.GQ.F70425.Yyyys in File Format)
- DPSxx.GQ.F70414.Yyyys - Class Size Report, Grades 9-12, Based on Class Average Table (DPSxx.GQ.F70426.Yyyys in File Format)
- DPSxx.GQ.F70415.Yyyys -Class Size Report, District Summary, Based on Class Average Table (DPSxx.GQ.F70615.Yyyys in File Format)

- DPSxx.GQ.F70465.Yyyys – Schools on the Master School ID but not on the Class Average Table
- DPSxx.GQ.F70466.Yyyys – Numerators/Denominators by School/School Type/Grade Group (DPSxx.GQ.F70588.Yyyys in File Format)
- DPSxx.GQ.F70467.Yyyys – PK-3 Classroom/Term Periods with 10 or fewer students or 10 or more students over cap, including Charter and DJJ (DPSxx.GQ.F70470.Yyyys in File Format)
- DPSxx.GQ.F70468.Yyyys – 4-8 Classroom/Term Periods with 10 or fewer students or 10 or more students over cap, including Charter and DJJ (DPSxx.GQ.F70471.Yyyys in File Format)
- DPSxx.GQ.F70469.Yyyys – 9-12 Classroom/Term Periods with 10 or fewer students or 10 or more students over cap, including Charter and DJJ (DPSxx.GQ.F70472.Yyyys in File Format)
- DPSxx.GQ.F70631.Yyyys – Percentage of co-classroom/periods by grade group (DPSxx.GQ.F70632.Yyyys in File Format)

The detail reports allow the district to see which term/classroom/period combinations are included in the average, what scheduling methods were reported, and the number of unduplicated students included in the count. It is extremely important that districts pull down and study these detail reports not only to assure that their classrooms are reported accurately, but also to be certain that no schools/classrooms that should have been reported have been excluded from the average.

It is possible for a district to emulate the Department's Class Average programming. The following COBOL programs are located in DPS.DISTRICT.SOURCE.Yyyy:

AVGCLASP  
CLASS01  
EXCLCLAS  
EXCLSTUD  
EXCLTCHR  
EXTRSTUD  
EXTRTCHR  
LDCLASS  
LDROOM  
LDSTD  
LDTEACH  
MAINCRSP  
MAINGRDP  
OOM01  
STUDENT01  
TEACHR01

Below is the order in which Education Data Systems runs the above jobs in order to determine class averages.

- 1) Extract CS Teacher Course and CS Student Course
  - EXTRTCHR
  - EXTRSTUD
- 2) Load CS\_Room and RunStat
  - ROOM01
  - LDROOM
- 3) Load CS\_Class and RunStat
  - CLASS01
  - LDCLASS
- 4) Load CS\_Teacher and RunStat
  - TEACHR01
  - LDTEACH
- 5) Load CS\_Students and RunStat

- . STUDNT01
- . LDSTD
- 6) Update Main Course on CS\_Room
  - . MAINCRSP
- 7) Update Main Grade on CS\_Room
  - . MAINGRDP
- 8) RunStats for DPS1.CS\_ROOM
- 9) Identify all duplicate students to eliminate them from processing
  - . EXCLSTUD
- 10) Identify all classes and teachers eliminated because they no longer have associated students
  - . EXCLTCHR
  - . EXCLCLAS
- 11) Calculate Average Class Size and produce average reports
  - . AVGCLASP
  - . AVGDJJ
  - . AVGCHART

## Questions and Answers

1. How do I make sure that multiple classes taught in a “pod” that is only assigned a single FISH number are adjusted appropriately?

To be certain that multiple classes taught in one large classroom separated by temporary “walls” are adjusted appropriately, each teacher who is the primary teacher for each group of students should be coded with Scheduling Method “M” – “Multiple-Use Classroom or Pod.” In this way, all of the students in the “pod” will be added together and then divided by the total number of teachers coded “M.”

2. How does the Scheduling Method code “C” (Co-Teacher) affect the Class Size calculation?

If two or more teachers are assigned to a group of students and each of the teachers is responsible for ALL of the students during the ENTIRE period span indicated on the schedule, then all of the teachers should be coded “C” and the total number of students (unduplicated) will be divided by the number of teachers marked with a “C.” Note: Beginning in 2006-07, all team teaching will be used in calculating compliance with the school average class size. Further, the recalculation of the 2005-06 school-level baselines will include this item as well as those marked with a Scheduling Method of “I” for figuring averages.

3. What is the correct way to handle classes to which two different Scheduling Method codes are applicable? Both of our high schools use Block Scheduling so their Scheduling Method will be, “B.” They also have JROTC classes which are taught by co-teachers, which is code, “C.” What is the correct way to decide which code to use?

You should code all the applicable JROTC teachers with Scheduling Method C so that the total number of students in the classroom is divided by the total number of Co-Teachers. Since “C” has an arithmetic function in the Class Size Algorithm, while “B” is an informational code, “C” takes precedence.

4. Are the students assigned to the “I” (In-Class One-on-One) teacher factored to reduce class size?

Yes. In Class One on One students are factored in the class average in that they are divided by both the instructor assigned to those students as well as the other non-I instructors assigned to the class.

5. If two teachers are assigned to one classroom, should they both be coded as Co-Teachers?

Not necessarily. Only if BOTH teachers are responsible for ALL students, should they both be coded as Co-Teachers.

6. What if two teachers are assigned to one class, but one of them is only responsible for one student or a small group of students in the classroom?

The primary teacher should be coded “S” (Self-Contained). The other teacher or teachers should be assigned to the students for whom he or she is responsible and coded “I” (In-Class One-On-One).

7. Should a separate Course Number be assigned to courses taught by “In-Class One-On-One” teachers?

Course numbers are determined by the student performance standards associated with the course. If the “In-Class One-On-One” teacher is responsible for the same student performance standards as the general education teacher, then both teachers should be assigned the same course number. If the “In-Class One-On-One” teacher is teaching different skills, then the appropriate course number for those performance standards should be assigned.

8. In a Support Facilitation model classroom in which there is a Self-Contained teacher and an Exceptional Student Education teacher, should they both be coded "C" (Co-Teacher)?

No. In a Support Facilitation model classroom, an ESE teacher provides support for ESE students' achievement. Support facilitators work with the general education teachers and students identified with exceptionalities as needed. In this model, the basic education teacher is coded "S" (Self-Contained) and the ESE teacher is coded "I" (In-Class One-On-One).

9. What is the purpose of the data element "Term/Survey Indicator"?

The data element "Term/Survey Indicator" allows districts to determine which classes actually meet during the state reporting period (FTE survey week) being submitted. In this way, for instance, if districts submit classes meeting during Terms 6 and 7 for funding, but only the Term 6 classes are in session during the survey week, these classes should be marked "Y" and the Term 7 classes should be marked "N."

10. Why does the Class Size Algorithm only average core courses taught on Friday?

Due to the huge volume of data that is necessary to be processed to determine the averages, it was decided to take a snapshot of a representative day of the week. The statistical difference between averages derived from one day and those derived from every school day were not significant enough to justify the investment of time and resources necessary to process the larger sample size.

11. What is the purpose of the data element "Day of the Week Scheduled, Date Certain"?

In a few schools in the state, no core courses are taught on Friday, the day used in the Class Average Algorithm. The data element "Day of the Week Scheduled, Date Certain" was created for districts with ENTIRE SCHOOLS that do not teach core courses on Friday. This data element should be coded "Y" only if an entire school would not be included in the class average calculation because NO core courses meet on Friday. In that case, the district should choose another representative day and mark "Day of Week Scheduled, Date Certain" for all of the courses that meet on that day.